

Studies on Rigvedic Deities



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INTRODUCTION.

The present work is a collection of twenty-one papers which were read in the monthly meetings of the Asiatic Society of Bengal in the course of two years or so. These papers, originally without any arrangement, are now published together, and are arranged according to the subject matter.

The numerous deities invoked in the hymns of the Rigveda comprise celestial, atmospheric, and terrestrial objects of various forms. Even common articles of daily use and various abstract matters (as mind, soul, etc.) have been personified as deities. In this present series of articles, we are concerned only with deities whose physical nature can be interpreted from the astronomical and meteorological points of view.

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I. HEAVEN (DIV), FIRMAMENT (ANTARIKṢA), AND
EARTH (PṚTHIVĪ).

1. *Worlds in general.*

Throughout the ten maṇḍalas of the Rīgveda, we have numerous references to different worlds, under different names, either individually or in groups.

First, let me enumerate the different worlds as they are mentioned in groups.

(1) Dyāus (Dyāvā, Div), Antarikṣa and Pṛthivī (I. 115. 1 ; II. 12. 2, with parvatas ; III. 22. 2, with water and herbs ; III. 54. 19, with the sun ; VII. 35. 5 ; X. 59. 7 ; etc.). There are references to objects pertaining to them in several places (VI. 22. 8 ; VIII. 6. 15 ; X. 65. 9).

(2) Div, Rodasī and pṛthivī (wide) Antarikṣa (II. 15. 2 ; X. 88. 3).

(3) Div, At (occurring as Adbhyaḥ, from the sky according to Sāyaṇa) and Pṛthivī (II. 38. 11).

(4) Div, Pṛthivī (Antarikṣa, according to the Nighaṇṭu) and Bhūmī (V. 85. 4).

(5) Div, Apa and Pṛthivī (X. 88. 2).

(6) Div, Jma (Pṛthivī—Nighaṇṭu, I. 1), Apām (sky) (VI. 52. 15).

(7) Div, Ṛta, Pṛthivī (VI. 41. 1).

(8) Div, Āpa and Kṣiti (III. 13. 4).

(9) Dyāvā Kṣāmā (heaven and earth) and pṛthivī (wide) Antarikṣa (III. 8. 8). They have also been used in plural for the objects connected with them (VIII. 70. 4).

(10) Rodasī (Dyāvā pṛthivī) and Antarikṣa (I. 73. 8 ; V. 85. 3 ; VII. 12. 24 ; X. 139. 2).

(11) Rodasī and Madhya (middle region) (X. 55. 3).

(12) Rodasī and Div (sky as loosely applied) (I. 33. 5).

(13) Rodasī, Ṛṣva (highly placed) Nāka (Div or Āditya according to Nighaṇṭu, I. 4) and Nakṣatra (VII. 86. 1).

(14) Rocanā, Dyāvābhūmī, Antarikṣāḥ and svarṇaram Pṛthivī (X. 65. 4).

(15) Parama Vyoma (VI. 8. 2) which is said to be inhabited (IV. 40. 5).

These regions have been further subdivided, as we shall see below :—

(1) Three Antarikṣas, three Rājasas, three Rocanas, three Divas, and three Pṛthivīs (IV. 53. 5).

(2) Three Mothers (earths), three Apas, and Tridiva (three Divas) (III. 56. 5).

- (3) Three Divas (I. 35. 6; VII. 101. 4).
- (4) Three upper Rocanas (luminous regions or bodies) (III. 56. 8).
- (5) Three Bhūmī (in dual), that is, three Dyāvābhūmīs (VIII. 41. 9).
- (6) Three Pṛthivīs (I. 34. 8); also tridhātu (three-regioned?) Pṛthivīs.

Next, we are told something about the creation of the worlds.

(1) Div (heaven) arose from the head, Antarikṣa (sky) from the navel, and Bhūmī (earth) from the feet of Puruṣa (X. 90. 14).

(2) 'Ka' (Who?—Brahman) is the Creator of the Div, Āp, and Pṛthivī (X. 121. 9). He placed Div and Pṛthivī in position (X. 121. 1).

(3) Brahman made Div and Pṛthivī firm (in position); Svar and Nāka are supported by him; he arranged for water in the sky (X. 121. 5).

(4) Viśvakarman spread the extensive Div after having created the earth (X. 81. 2).

(5) The Creator created the sun, moon, Div, Pṛthivī, and Antarikṣa in proper time (X. 190. 3).

Lastly, we are informed of some general facts about them.

(1) There are thirty-three Devas in all: Eleven in heaven, eleven on earth, and eleven in the sky (I. 139. 11).

(2) The two Rocanas (luminous regions) are placed above the sun and Āpa (sky) is situated below it (III. 22. 3).

(3) Indra by Śacī (ability) holds Div and Pṛthivī all round, as a wheel is held by an axle (X. 89. 4).

(4) Pūṣan remains in the high Div, Soma on the pṛthivī Antarikṣa (sky) (Pṛthivyām here is better and more reasonably made to qualify Antarikṣa and signifying vast in extent) (II. 40. 4).

(5) The Sun has been requested to protect from (the disturbances arising in) Div, Vāyu from (those of) Antarikṣa, and Fire from (those of) Pṛthivī (X. 158. 1).

(6) The Soma goes round the high regions of Pṛthivī from Div and Antarikṣa (IX. 63. 27).

(7) The Dawn spreads over Div and large Antarikṣa (IV. 52. 7).

All the passages above referred to lead one to the idea that the Rigvedic sages recognised three well-defined worlds, viz. heaven, sky, and earth. A fourth region is also mentioned as *paramā Vyoma*—a space at a great distance.

The heaven (*Div*), as its name implies, is characterised by luminous bodies. It is the highest of the three worlds. *Nāka* indicates the highest region of the heaven beset with stars

(I. 34. 8; III. 2. 12; etc.); it may have been referred to as the higher region of the sky (I. 19. 6), where it is said that the Devas live on the top of the *Nāka* in the luminous region; it might have indicated the boundary line between the heaven and sky.

The heaven and earth have been mentioned or addressed many times under the names of *dyāvāprthivī*, *dyāvākṣāmā*, *dyāvābhūmī*, *rodasī*, and *rajasī*.

The sky or firmament has usually been mentioned as *antarikṣa* (literally meaning 'the region below the stars'). It has also been named *rajas*, *madhya* (middle region), *āpa* (region of waters), and sometimes *prthivī* (extensive region). Sometimes the word 'div' has been loosely used for it. It is distinctly the world (or rather the space) between the heaven above and earth below.

The earth is usually named *prthivī*, but is also called by the names *bhūmī*, *kṣāmā*, and *jmā*.

These three regions have been further subdivided, usually into three each. It is rather difficult to form an idea of the extent of these subdivisions from the meagre materials we have at our disposal.

There are three divisions of the heaven. *Nāka* is the highest region with stars, according to the majority of the sages. Further, there is mention of two (other?) luminous regions of the heaven above the sun. Even a superficial observer of the heaven, after having looked at it for several nights, will be able to distinguish three strata of the heaven, the lowest one with the moon, the middle one with the planets, and the topmost one with fixed stars. The sun's place, according to several passages, is also in heaven.

I shall consider this again, in connection with heaven.

Sky has a similar threefold division. Here, with still more uncertainty, we take the highest region with the path of the sun (I. 35. 11), the middle clear region and the lowest cloudy region. Here, too, we have mention of three *antarikṣas* and three *rajasas* in the same passage (IV. 53. 5). This can only be reconciled if we think of three clear upper layers and three cloudy lower layers.

Lastly, we find the same threefold division of the earth. These may doubtfully be taken to be the mountainous regions, the plains and the watery tracts.

2. Individual Worlds.

As we have still much to learn of the three individual worlds, I shall discuss them one after another.

(a) HEAVEN.—This world has been addressed as *div*, *sva*, *nāka*, and *tridiv*.

Heaven has been addressed as the father (I. 89. 8). It is regarded as the grandfather of the Ásvins (I. 184. 1 ; X. 61. 4) and of Indra-Varuṇa (III. 38. 5), and as the father of the Ásvins (I. 117. 12 ; etc.), Agni (III. 1. 6, 9 ; III. 31. 9), the sun (IV. 15. 6 ; X. 37. 1), the Maruts (X. 71. 2), Parjanya (VII. 102. 1), the dawn (IV. 30. 8 ; etc. many times), and the night (X. 127. 8). Again, Indra (VIII. 36. 4 ; VIII. 63. 2) and Soma and Pūṣan (II. 40. 1) are regarded as the fathers (originators) of the heaven.

Ásvins (VI. 62. 1 ; X. 143. 3) and the Maruts (II. 36. 2) are the leaders of heaven. Maruts, again, are the guides of the heavenly path (V. 54. 10). Indra is the lord of heaven (VIII. 13. 8, 12 ; X. 111. 3). Heaven is made to tremble by Indra (I. 61. 14 ; IV. 22. 3) and by the Maruts (I. 37. 6).

Heaven is the abode of gods and other objects. We find mention of Agni (III. 27. 12), Ásvins (I. 30. 9 ; I. 180. 10 ; IV. 43. 5), Indra (V. 74. 1 ; etc.), Rbhus (III. 33. 1 ; IV. 36. 1), the dead Fathers (X. 15. 14), Pūṣan (II. 40. 4), Maruts (V. 87. 3), Mitra-Varuṇa (X. 65. 7), Rudra (I. 114. 5 ; I. 122. 1 ; VII. 46. 3), Vṛhaspati (X. 67. 10), Vena (IX. 85. 10), Soma (IX. 97. 13 ; IX. 85. 9 ; etc.) and the sun (IX. 113. 10, referred to as the 'root' or basis of the worlds). Indra is said to have disposed the 'month' on heaven (X. 138. 6). The sun rises in heaven (I. 50. 11 ; VII. 63. 4), his disc remains in heaven (V. 27. 6) and his chariot moves in heaven (X. 138. 3). The circular path of the sun, consisting of twelve divisions, lies in the heaven (I. 164. 11). The eye of the sun appears in heaven after an eclipse (V. 40. 8). The three regions of heaven are laid in Varuṇa, who made the golden sun swing in heaven for benefit (VII. 87. 5). Saramā, the bitch, came to the Paṇis from heaven above (X. 108. 5). There are eagles in heaven (X. 92. 6 ; X. 94. 5), evidently referring to the constellation Aquila. Night and dawn come, one before another, in heaven and earth, and travel in them (I. 62. 8). The light of dawn arises in heaven (VI. 64. 2). Dawn spreads over heaven (IV. 52. 7).

Again, heaven is the place of water. Extensive tracts of water are located in heaven (IX. 113. 8). Three streams of heavenly water flow away in three directions (VII. 101. 4). These evidently refer to three branches of the milky way. The cloud (*varṣabha*) arises in heaven (VII. 36. 3). Water is formed in heaven (I. 33. 10 ; IV. 57. 5 ; VI. 13. 1) by the gods (X. 114. 1). Rainwater is held in heaven by Prajāpati (I. 164. 25). The Maruts also hold water in heaven (VI. 66. 11). Mitra-Varuṇa are the lords of water in heaven and earth (VII. 64. 1). Indra (I. 54. 7 ; I. 56. 5 ; VI. 44. 21), Maruts (V. 57. 1 ; V. 83. 6), Soma (IX. 108. 10) and Mitra-Varuṇa (V. 63. 6 ; V. 83. 6) help in downpour of rain from heaven. The Visva-devas milk the lying one (that is, cloud) in heaven (III. 57. 2).

All these passages may refer to the milky way (celestial waters) or they may really indicate the sky, the word *div* being loosely applied.

Now let us consider the position of heaven and how it is held in its place. Heaven is distant from us (VI. 40. 5) and is placed above the sea (sky, according to Sāyaṇa) (VIII. 97. 5). Heaven is held by itself (V. 32. 10) and is supported by Indra without a pole (*avamśe*) (II. 15. 2). Indra held it so firmly that it may not fall down (II. 17. 2, 5; II. 27. 8; III. 30. 9). He supports it high above the earth (X. 55. 1). The sun also holds the heaven without support (X. 149. 1) and is regarded as the supporter of heaven (IV. 13. 5). He has placed it higher up (IV. 31. 15). Soma, again, is said to support it like a pillar (IX. 74. 2) and she is regarded as acting as a pillar (IX. 87. 2). In one place (VI. 72. 2), Indra and Soma are regarded as having held the heaven by a support (sky, according to Sāyaṇa). Lastly, Agni (II. 11. 5), Mitra (III. 59. 1), Mitra-Varuṇa (V. 62. 3), Varuṇa (VIII. 42. 1), and Ṛbhus (X. 66. 10) are also said to support the heaven.

There are other characteristics of heaven. (1) It is constantly bright (IX. 113. 7), with bright regions (IX. 113. 9). It is called luminous (*devī*) (V. 32. 10). It is decorated with stars (II. 2. 5; II. 34. 2; VIII. 55. 2; X. 68. 11; X. 111. 7). There is mention of meteors in heaven (X. 68. 4). It is recognised by Navahs (*Ādityas* according to Sāyaṇa) (II. 4. 6). (2) There are two gates (I. 48. 15), a staircase (I. 52. 9) and the sea (X. 98. 10) in heaven. (3) Heaven is imperishable (IX. 113. 7), undecayable (IX. 113. 7). There is every kind of pleasure in heaven and all desires are fulfilled there (IX. 113. 10). (4) *Vaivasvata* is the king of heaven (IX. 113. 8).

Lastly, we may consider briefly the divisions of heaven already alluded to. We are informed of the highest (*uttama*), middle (*madhyama*) and lower (*avama*) regions of heaven (V. 60. 6). There are three Divas and three *Nākas* in heaven (IX. 113. 9). The three Divas are said to hold the luminaries (*rocanas*) (II. 27. 9) the regions of which are again three in number (I. 105. 5; VIII. 10. 1; VIII. 82. 4; IX. 17. 5). *Nāka* is the highest region of heaven (IX. 73. 4; IX. 85. 10; X. 130. 2); it is the back of heaven (III. 2. 12). The wide, high *Nāka* was held up by Viṣṇu (VII. 99. 2). It is provided with stars (I. 68. 5; VI. 49. 12). It is the abode of gods (I. 19. 6; I. 164. 50; VII. 58. 1; X. 90. 16; etc.). The *Rocanas* (luminaries) shine in heaven (I. 6. 1; I. 81. 5; VI. 7. 7; IX. 37. 3; etc.). They are said to form the third region of heaven (VI. 44. 23; IX. 75. 2). Commencing from below, we may take the three strata of luminaries (those of the sun, moon, and planets) as forming the third (lowest) region, the regions of the stars (divided into three) as forming the highest region and an intermediate second region of the heaven.

(b) EARTH.—The earth has been mentioned or addressed as *prthivī* in most of the passages, *kṣiti* (I. 65. 3 ; V. 35. 2 ; VI. 46. 7 ; etc.), *prthivī* (X. 31. 9, the word elsewhere signifying 'spacious' and used for qualifying various regions), *bhūmi* (III. 30. 9 ; V. 85. 4 ; IX. 61. 10 ; etc., the word being also used for ground in II. 11. 7 ; IV. 26. 2 ; IV. 57. 8 ; VI. 47. 20), *avani* (II. 13. 7, also used for river, as in I. 190. 7 ; V. 85. 6 ; etc.) and *gālū* (earth or ground, V. 32. 10). The word *kṣiti* in the plural has been used to mean people on earth (V. 32. 10 ; V. 36. 6 ; VI. 1. 5).

Earth is regarded as mother (V. 72. 2 ; VIII. 103. 2 ; X. 62. 3 ; etc.). Indra (VIII. 36. 4) and Soma and Pūṣan (II. 40. 1) are the fathers or originators of the earth. Indra (II. 15. 2 ; VIII. 89. 5) and Indra and Soma together (VI. 72. 2) make her spread (that is, become vast in extent).

Indra made the shaking earth firm and the trembling mountains quiet (II. 12. 2). This probably refers to an earthquake. Again, the earth trembles from fear of Indra (I. 61. 14 ; IV. 22. 3) and Maruts (I. 37. 6). Indra shook the earth and produced curls (clouds, according to Sāyaṇa) in the heaven (VIII. 14. 5).

Downpour of rain occurs on the earth through the agency of Indra (VI. 44. 21), Maruts (VI. 54. 8) with the help of clouds (I. 39. 9 ; I. 164. 47 ; V. 83. 4) and Soma (IX. 8. 8 ; IX. 96. 3). Lightning appears on earth in a downward direction (I. 168. 8). Vāyu travels on earth by scattering dust on all sides (X. 168. 1).

Earth is supported by Indra (I. 67. 1 ; II. 15. 2 ; II. 17. 5 ; X. 89. 4), Mitra (III. 59. 1), Mitra-Varuṇa (V. 62. 3) and Soma (IX. 86. 29 ; IX. 100. 9 ; etc.). Indra fixed the earth in her own place (III. 30. 9). Varuṇa holds the eastern side of the earth (VII. 99. 2).

Varuṇa is said to know the extent of the earth (VIII. 42. 1) and he measured her extent through the sun (V. 85. 5). The sun holds all the worlds. He gave origin to the earth and heaven, after having measured them with good fingers (IV. 54. 8).

As regards the position of earth, we find it mentioned that it is placed at the base of (that is, below) the sky (II. 2. 3).

She is the abode of water (V. 66. 5 ; X. 73. 9 ; etc.), herbs (III. 22. 2 ; X. 27. 23 ; X. 73. 9) and trees (I. 39. 3 ; III. 8. 3). She holds the mountains (V. 84. 1) and the trees on the ground (V. 84. 3). She is the abode of men (I. 22. 15 ; VII. 59. 3 ; VI. 1. 5 ; VII. 100. 4). Men travel in different directions on earth by land (X. 56. 7).

There are several other characteristics : it is wide (I. 131. 1 ; III. 30. 9), unlimited (III. 30. 9), strong (III. 30. 9), giver of comfort (III. 30. 9), and is sustainer of all (II. 17. 5).

There are eight directions of the earth (I. 35. 8).

There are three regions of the earth (VII. 104. 11); they are disposed in six ways (VII. 87. 5; Sāyaṇa takes them to mean six seasons).

Again, in *Puruṣa-sūkta* (X. 90. 1), we are told that *Puruṣa* (the Divine being) has one thousand heads, a thousand eyes, and a thousand feet. He extends over a space of ten fingers after having fully spread over the earth.

Lastly, there are passages in the *Rigveda* which tend to suggest that the *Rigvedic* sages had idea of the axial rotation and orbital motion of the earth. Although several Vedic scholars had already tried to produce evidences on this matter, Paṇḍit Tārakeśvar Bhaṭṭāchārya discussed it fully in Bengali in the periodical, *Bhāratavarṣa*, Bengali era 1326, Vol. 7, Part I, p. 729. The evidences are quite convincing. As the paper is out of reach beyond Bengal, the subject is briefly dealt with here. First, on the rotation of the earth. The earth is revolving (*uruci*) (VII. 35. 3). The sun, having fixed the earth so that she may not fall down, has put her in her place and is making her revolve (VI. 8. 3). The heaven and earth is revolving together (VIII. 6. 5). The earth is revolving with day on the eastern half and with night on the other (VI. 9. 1). Again we are told that what is the upper region becomes lower and what is the lower region becomes upper; the moon, sun, and the other heavenly bodies seem to be in motion to us, as (a fixed place) to one on wheel (that is, moving in a carriage) (I. 164. 19). The dawn is making the sun visible on the eastern half of the earth (I. 92. 1); she is giving birth to the sun on the east (VII. 78. 3). These two passages evidently indicate that the rising of the sun is the work of somebody else. There is a long passage in Taitt. Br. (3. 4. 6.), which distinctly points to the fixity of the sun: The sun never sets, nor he ever rises. When he appears to set, he terminates the day in that region and does the opposite, that is, gives rise to night in that region and day in the other; again, when he seems to rise in the morning, he gives rise to day in that region and night in the other. Next, on the orbital motion of the earth. The earth is movable and is capable of travelling (V. 84. 2). The sun is making the earth travel (IV. 56. 3). The sun is making the heavy earth move with his fingers (VI. 54. 4). The earth's motion is not irregular (I. 160. 4). The sun, by his attraction, has placed the earth in space (without support) and is making her move (X. 149. 1). The long, eastward and heavenly path of the earth extends on the east (X. 110. 4).

(c) HEAVEN AND EARTH.—These are mentioned or addressed in a large number of passages under the names of *dyāvāprthivī* (in five hymns dedicated to them and elsewhere), *dyāvākṣāmā*, *dyāvābhūmī*, *rodasī*, and *rajasī*. They have also been referred to as Father and Mother (I. 121. 5; I. 161. 10; X. 54. 3) and have also been qualified as such (V. 43. 2; VI. 70. 6; X. 65. 8).

The term *rodasī* has also been used to qualify *dyavaprthivi* (II. 1. 15; VII. 5. 4) and *dyāvābhūmī* (X. 12. 4) showing its significance. The term, however, has also been applied to the earth only (as in *Rodasī* and *Div*—V. 61. 12; VI. 48. 6; IX. 74. 2, if we do not accept 'div' to mean the sky). In another place (VIII. 70. 5), *rodasī* might have meant the sky. Lastly, there is a phrase *pr̥ṣṇi suretas vṛṣabha* and the word *dhenu* (I. 160. 3) which seem to refer to heaven and earth respectively. The phrase evidently means spotted (starry) downpours with good germs (one capable of fertilising by rain).

We have references to objects relating to heaven and earth (X. 32. 2).

The gods are regarded as their sons (I. 185. 4).

They are paired (I. 159. 4; III. 54. 7) and are like two sisters (I. 159. 4; I. 185. 5; III. 54. 7). They have a common origin (I. 159. 4).

Indra begot the heaven and earth together (X. 54. 3). He spread over them all round (II. 15. 2). He follows them as he does the circle of *Etaśa* (VIII. 6. 38). Again, he made them tremble (VIII. 97. 14).

Heaven and earth are held fast by *Varuṇa* with a prop (VIII. 41. 10), separately or firmly (*viṣkabhita*) (VI. 70. 1). The Sun is said to hold them with undecaying supports (I. 160. 4). *Soma* is also said to support them (IX. 101. 15). Again the sky is placed between them for their support (III. 38. 3). Again, they are said to be without support (IV. 56. 3) and fixed, immovable, and footless (I. 185. 2). The dawn remains on one side of heaven and earth (VII. 80. 1).

Indra and *Varuṇa* are said to have measured their extent after having anointed them together (III. 38. 3).

They are said to remain together (united?) (I. 185. 5; III. 38. 3; III. 55. 20; X. 89. 13) and have the same boundary (I. 185. 5). They enclose everything between them (VI. 70. 1; IX. 81. 5). Again, they are said to remain separate (I. 159. 4) and not to cling to each other (I. 160. 2; VI. 70. 2). They are separated equally all round (*ante*) and remain in the fixed point (*dhruva pade*) at a distance (III. 54. 7). They revolve like a wheel as the day and night (I. 185. 1). The sun (I. 160. 4) and *Āsvins* (IV. 34. 9) make them separate. The sun moves between them (I. 35. 9). The moon appears between them (III. 61. 4).

They are the abodes of gods (I. 185. 6).

They are intimately connected with water, as shown by numerous epithets bestowed upon them, viz. *bhūri retasā* (VI. 70. 1), *bhūri dhāre* (VI. 70. 2), *payasvatī* (VI. 70. 2), *kṣīra rasavinī* (III. 6. 4), *ghṛtasnu* (X. 12. 4), *ghṛtavr̥dhā* (VI. 70. 4), *madhudugha* (VI. 70. 5), etc.

They have other characteristics assigned to them. Thus

they are youthful (III. 54. 9) and ever remain so (I. 185. 5); they are wide in extent (I. 185. 6; I. 160. 2; IV. 56. 3; etc.), limitless (I. 185. 7) and deep (IV. 56. 3).

(d) SKY OR FIRMAMENT.—The sky is referred to as *Antarikṣa* (signifying the region below the stars) in a large number of passages, but is also addressed by the name of *Antar* (I. 105. 1), *Abudhna* (rootless) (VIII. 77. 5), *Rajas* (I. 50. 7; I. 56. 5; I. 62. 5; etc.; also used in other senses elsewhere), *Āpa* and *Nabhas* (VII. 97. 6; IX. 71. 1; X. 30. 9; etc.). The words *Div* and *Nāka* have also been loosely applied to it.

Rbhus are considered as the leaders of the sky (I. 110. 6).

Indra (III. 30. 9; III. 49. 4) and Soma (VI. 47. 4) are said to hold the sky.

The sun (VII. 45. 1), dawn (VII. 75. 3; X. 95. 17) and Indra (I. 51. 2; II. 15. 2; VII. 98. 3) are said to fill the sky with light. Again Indra (II. 12. 2) and Varuṇa know the extent of the sky through the sun (V. 85. 5).

The sky is the abode of the gods (I. 48. 12; III. 6. 8; V. 53. 8; IX. 5. 2; etc.). Vāyu spreads in the sky (I. 161. 14; X. 168. 3). The sun's path is on the sky (I. 35. 11). Pūṣan's boat travels in the sky (VI. 58. 3) and that of Aśvins (I. 116. 3) as well.

The sky is blue (VII. 97. 6), wide in extent (I. 91. 22; II. 15. 2; etc.), spacious (III. 55. 191; IV. 52. 7; etc.), bright (VIII. 14. 7) and decorated with stars (III. 55. 19). Rain-water collects in the sky (IX. 71. 1; X. 30. 9) and clouds spread in the sky (V. 83. 3).

3. Remarks.

Considering the various facts regarding Div, Antarikṣa, and Pṛthivī and the different characteristics assigned to them, we may take them to represent the heaven, sky, and earth—the three regions of the universe. The sages also recognised a fourth very distant space under the name of *parama Vyoma*.

In this connection we must consider the views of V. G. Rele, as set forth in his work entitled 'The Vedic Gods as figures of Biology'. This scholar regards the heaven, sky, and earth as the three portions of the human Central Nervous System. He cites numerous passages from the Rigveda, mostly irrelevant, as evidences in favour of his view. I shall select the more important ones and see how far they actually support his views.

Heaven is identified with the brain, or rather the two cerebral hemispheres together. These are two large bodies with a deep cleft between them. They are comparable to the kernel of walnut. He tries to prove the dual nature of the heaven and earth (that is, there are two heavens and two earths) from various passages (I. 159. 4; I. 160. 2, 5; III. 38. 3; III. 55. 20; VIII. 37. 4; X. 89. 4; etc.) all of which, however,

simply mean 'heaven and earth' and not 'two heavens' or 'two earths'.

Earth is identified with the spinal cord, the long cylindrical body which occupies the canal of the back bone. He cites a few passages (I. 24. 7; III. 38. 3; X. 81. 4; etc.) as a proof that the earth of the Rigvedic sages is not a circular body but a long narrow rod-like structure, like the spinal cord. The first passage has a phrase *vanasya stupa* which he takes to mean 'the stem of a tree', but, considering the context, *vana* really means 'rays' (Nighaṇṭu, I. 8). A portion of the second passage means 'from what wood or tree were heaven and earth fashioned?' It does not necessarily mean that the earth was rod-like in shape. Even if we take it to be so, we should also consider the heaven of the same shape. In the third passage, he takes *rodasī* as two earths and *mātrā* as a 'measuring rod', but *rodasī* actually means heaven and earth and if *mātrā* be an indication of the 'lengthwise expanse of the earth' according to his interpretation, then both the heaven and earth would be rod-like.

Lastly, the sky is identified with the middle portion of the central nervous system. It is a short pyramidal body lying in an oblique direction beneath the cerebral hemispheres connecting them together with the spinal cord. He cites a few passages (II. 15. 2; IV. 56. 3) to indicate that the sky is rafterless, but they refer to the heaven and heaven and earth respectively and not to the sky. Another passage (I. 56. 5), referred to as an indication that the sky 'is located on the top of the posts that support the heaven', has nothing to suggest this import. He also cites another passage (VII. 99. 3) interpreting it that Viṣṇu fixes the earth to the heaven by pegs. *Mayukhāḥ* which he takes to be pegs, mean sun's rays (Nighaṇṭu, I. 8). In much later times it is made to represent, evidently secondarily, the pin of a sun-dial.

Taking these facts into consideration, I cannot accept his views. The various characteristics of the three regions, as we find them in the Rigveda, seem to be quite clear and to show that they are really the heaven, sky, and earth.

II. VISIBLE PORTION OF THE CELESTIAL SPHERE.

DITI AND ADITI.

The word *diti* occurs three times. Once (VII. 15. 12) she is simply invoked for wealth. In two other places Diti and Aditi are prayed to together. In one passage (V. 62. 8) we are informed that in the morning at sunrise Mitra and Varuṇa look at Diti and Aditi in their golden chariot with golden spokes. In the other (IV. 2. 11) Agni is invoked to grant Diti (perhaps meaning a 'giver') and protect from Aditi (perhaps signifying a 'non-giver').

Diti is also mentioned with Aditi in Vājasaneyī Saṃhitā (15. 22) and Atharvaveda (XV. 18. 4; XVI. 6. 7). We also get the mention of Diti's sons in the Atharvaveda (VII. 7. 1) as the Daityas, who were regarded as the enemies of the gods.

The word *aditi* occurs about one hundred and forty times in the R̥gveda. The term seems to refer to the goddess Aditi in more than hundred passages, where she has been invoked or incidentally mentioned either alone or with other deities. In the remaining passages the term has been used to qualify or mean some other deities. Thus in several passages it is made to qualify fire (as boundless or without limit or division) (I. 94. 5; II. 1. 11; IV. 1. 20; VIII. 19. 14) and Vivasvat (the sun) in one (VII. 9. 3). Again, Soma (the moon or the soma plant) has been addressed as Aditi (VIII. 48. 2). The intoxication due to the drinking of soma juice has been said to be *aditi* (very intense) (V. 44. 11). Again, we have the phrase *aditi grāvāna* (V. 11. 5), which probably means a vast (widespread) cloud; probably the same significance is to be held in the phrase *aditeḥ vṛṣṇeḥ* (from the vast cloud) (X. 11. 1). Lastly, it seems to have been used for the earth and cow. In several passages (VII. 88. 7; IX. 26. 1; 69. 3; 71. 5; 74. 3, 5) we get the phrases *aditeḥ upastha*, *aditeḥ upasthāt* and *aditeḥ upasthe*, signifying 'on or over Aditi'. Sāyaṇa takes them to mean the earth (or the ground), 'but in all of them we may take *aditi* to mean the heaven as well. In another passage (V. 59. 8) we have the clause *mimātu dyauḥ aditi vitaye naḥ*—'let the boundless heaven bring forth (rains) for our nutrition'. In one place (IX. 96. 15) the term has been made to mean the 'cow' by Sāyaṇa, when Soma (the moon or the soma juice) has been compared with the refreshing *payāḥ* (the white light or the milk) drawn from Aditi (the heaven or the cow).

The goddess Aditi has been invoked alone more than sixty-five times, and some forty times with other deities in various combinations. Thus she was invoked, some thirty-eight times with Mitra and Varuṇa, some twenty-seven times with Dyau

and the Earth, some twenty times with *Sindhu* (the river Indus), some twelve times with Aryaman and Indra, nine times with Bhaga, six times with Agni and Maruts, four times with Pūṣan, Viṣṇu and Savitar, three times with Soma and Vāyu, twice with Rudras, Vasus and Brahmanaspati, and once with several other deities.

In the various passages devoted to Aditi, we find her qualified with a number of attributes. She has been called a goddess (*devī*) (V. 69. 3; VII. 38. 4; VIII. 18. 4; X. 10. 2; X. 36. 3; etc.), huge or vast in extent (*mahatī*) (I. 24. 1, 2; VIII. 25. 3), non-moving (that is, fixed and unchangeable) (*anarvā*) (II. 40. 6; VII. 40. 4; X. 92. 14), sinless (unchangeable) (*anāga*) (I. 24. 15; I. 162. 22), inaccessible (not liable to be injured—*Sāyana*) (*anehasa*) (X. 63. 10), the mother (VIII. 25. 3), one with good sons (III. 4. 11), one with princely sons (II. 27. 7), all-spreading (*sarvatāti*, *uruvyacā*) (X. 100. 1; V. 46. 6), well-invoked (*suhavā*) (VII. 40. 4), provided with a good house (dome) (*suśarmā*) (X. 63. 10), without a second (unique) (VIII. 18. 6), provided with brightness (luminous bodies) (*rtāvati*) (VIII. 25. 3) and growing (or moving) with brightness (or brilliant bodies) (*rtāvrdha*) (VII. 82. 10).

There are several other characteristics of Aditi. She is quick-moving (IV. 3. 8). She has been described as one not going backwards (X. 92. 14), where she has been prayed to with all the women (celestial goddesses). She has been called *adri-varhā*, pre-eminent or widespread like a cloud (X. 63. 3). She has, again, been represented as the heaven, the sky (*antahrikṣa*), the mother, father and son, all the gods and the five places (of the Panjab) (I. 89. 10), evidently indicating that she practically pervades or covers everything; she represents birth (probably the origin of the celestial beings) and is the cause of the birth (I. 89. 10). Again (I. 196. 6), she is called the sister, whereas the heaven is designated as the father, the earth as the mother and the Soma (the moon), as the brother. Aditi and the Ādityas (IV. 25. 3) have been begged for their brilliancy. Aditi protects the beasts both in the day and night.

There are several other facts regarding Aditi. The sage Śunahsepa said that may Agni release him in the vast Aditi, so that he may see the father and mother (heaven and earth) (I. 24. 1). According to the sage Dirghatamas (I. 152. 6), Mitra and Varuṇa, travelling together, guard Aditi. Indra once spread over Aditi with his supremacy (VII. 18. 8). In one passage (X. 63. 2) the Visve Devas were invoked to come down on the earth from Aditi and the sky above. Dawn has been addressed as the mother of the gods and as the brilliancy of Aditi (I. 113. 19).

Lastly, we may consider a few other important passages regarding Aditi. First, we are told (X. 5. 7) that Agni is *asat* (non-existent—that is, without physical existence) and *sat*

(existent); he is placed in the highest space (*parama vyome*) above Aditi, above Dakṣa. Secondly, in X. 72 we have a concise account of the creation of the universe. Brahmanaspati, like a blacksmith, created the Devas (luminaries) with blast and smelting. The existent came out of the non-existent before the time of the Devas (X. 72. 2). In the age of the Devas (that is, when they were created), the existent came out of the non-existent. Then *āśā* originated. Above it (arose) *uttānapad* (one with the legs spreading upwards) (X. 72. 3). From *uttānapad* arose *bhu*. From *bhu* arose *ūśā*. From *aditi* arose *dakṣa*; again arose *aditi* from *dakṣa* (X. 72. 4). Oh *Dakṣa*! Aditi, who is your daughter, gave birth to (the Devas). The glorious Devas, held by indestructible ties, originated from her (X. 72. 5). The Devas, who remained in that space well bound down, threw hot (*tīvra*) particles, as if dancing like us (X. 72. 6). The Devas, who by stirring (agitation) pervaded the worlds, brought out the sun concealed in the ocean (X. 72. 7). Of the eight sons, born from the body of Aditi, she took away seven to the heavens and cast away *Mārtanḍa* (X. 72. 8). In the early age Aditi went with her seven sons and delivered *Mārtanḍa* for birth and death (X. 72. 9).

I shall now consider the sons of Aditi or Ādityas, as they have an important bearing on the determination of the physical nature of the deity. The following deities have been distinctly mentioned as the sons of Aditi. Mitra and Varuṇa (VI. 67. 4; VIII. 25. 3; X. 36. 3; X. 132. 6; X. 185. 3; etc.), Aryaman (VII. 60. 5; VIII. 47. 9), Bhaga (VII. 41. 2), Indra (IV. 18. 4, 8) and Soma (IX. 69. 3). In one passage (X. 72. 8), we are informed that eight sons were born from Aditi. The number of Ādityas has been differently stated in the various hymns of the Rigveda, the number going up to twelve in the Puranas. The lowest number is found in II. 27, where we have the names of Mitra, Aryaman, Bhaga, Varuṇa, Dakṣa, and Amṣa. The number has also been given as seven (IX. 114. 3), but no names are cited. Scattered throughout the Rigveda, we find the names of the following deities designated as Ādityas. Savitar (about eleven times), Mitra (about nine times), Varuṇa (about eight times), Aryaman (about eight times), Vasus (about eight times), Rudras (about six times), Indra (about five times), Maruts (about five times), Viṣṇu (about three times), Bhaga (about three times), Aśvins (twice), Rbhus (twice), Brahmanaspati (twice), Dakṣa (once), Amṣa (once), Agni (once), Vāyu (once), Pūṣan (once), Sūrya (once), Brhaspati (once), Apah (once), Parvata (?) (once), and Viśvadevas (once).

The lowest number of Ādityas in the Brāhmaṇas is given as seven, as in Śatapatha Brāhmaṇa (3. 1-3. 3) and Tāṇḍya Brāhmaṇa (23. 15. 3). Again, we have the number eight in Śatapatha Brāhmaṇa (3. 1. 3. 3), Tāṇḍya Brāhmaṇa (24. 12. 4), and Taittiriya Brāhmaṇa (2. 6. 19. 1-2). Śatapatha Brāhmaṇa

and Tāṇḍya Brāhmaṇa repeat the sense of the passage X. 72. 8 of the R̥gveda. The names given are Mitra, Varuṇa, Dhātār, Aryaman, Bhaga, Aṃśa, Candra (in Tāṇḍya Brāhmaṇa) or Indra (in Taitt. Br.), and Vivasvat. Lastly, in Śatapatha Brāhmaṇa (11. 6. 3. 8), the twelve months of the year are considered as Ādityas.

Again, in Śatapatha Brāhmaṇa (2. 2. 3. 9) the sun (as an Āditya) has been said to comprise all the (five) seasons: as he rises, it is (represents) spring; as he is higher up, it is summer; it is rainy season in the midday; it is autumn in the afternoon; and it is *hemanta* as he sets.

In Talavakāropaniṣad Brāhmaṇa (4. 5. 1-3), we have a list of deities, evidently the Ādityas, with the parts of the day and night over which they preside. Savitar in the morning; Viṣṇu before sunrise; Indra (Maghavendra Vaikuṇṭha) in the forenoon; Bhaga in the midday; Ugradeva (Rudra) in the afternoon; Yama in the reddening (of the sky) in the sunset; Soma in the darkness (evening); Pitar at night, entering (or pervading) persons in dreams and the beasts by water; Bhava in the depth of night (midnight), Angiras (Agnihotra) at the end of the night after Bhava, and Bhṛgu at the beginning of the (next) day. Again, in another place (4. 10. 10), we are told that Indra (Vaimṛdha) is at the sunrise, Savitar after sunrise, Mitra at the forenoon, Indra (Vaikuṇṭha) at midday, Śarva Ugradeva (Rudra) in the afternoon with reddening (of the sky) and Prajāpati at the sunset. In Bṛhadāraṇyaka Upaniṣad (3. 9. 5), the twelve months have been considered as the Ādityas of the *samvatsara* (year).

In Mahābhārata, we have the mention of twelve Ādityas, but the names enumerated are somewhat different in different places, so that the number of Ādityas becomes more than twelve in all. Taking them together, we find that the following deities were considered as Ādityas: Dhātṛ, Mitra, Varuṇa, Aryaman, Indra (Śakra), Aṃśa, Bhaga, Vivasvat, Pūṣan, Savitṛ, Tvaṣṭṛ, Viṣṇu, Parjanya, and Manu.

In Viṣṇupurāṇa (I. 15. 90) the eight Ādityas have been thus enumerated: Viṣṇu, Śakra, Vivasvat, Savitṛ, Mitra, Varuṇa, Aṃśa, and Bhaga. This, no doubt, refers to the earlier counting. In many Purāṇas we are told (as already indicated in Bṛhadāraṇyaka Upaniṣad) that the twelve Ādityas make their appearance in the twelve months (of a year), one in each month. They are thus enumerated: Vivasvat, Aryaman, Pūṣan, Tvaṣṭṛ, Savitṛ, Bhaga, Dhātṛ, Vidhātṛ, Varuṇa, Mitra, Śakra, and Ūrukrama.

In Nirukta (1. 15. 9) we are told that Aditi is all-in-all (*śirovam*) and that she is the heaven and the sky. Again, the term *aditi* is also a synonym of the earth (2. 5. 1), speech (*vāc*) (2. 23. 1), cow (3. 9. 11), and *Dyāvāprthivī* (heaven and earth) (3. 21. 7); she has also been called the mother of the Devas

(4. 22. 1 ; 11. 22. 1), the daughter of Dakṣa (11. 23. 3) and Agni (II. 23. 5).

As regards the significance of the two terms, *diti* is derived from the root *dit*, to bind, to divide or to cut. Hence it means one which is bounded, limited or divided ; whereas *aditi* means boundless, unlimited or intact.

Let us now consider the views of the oriental scholars. Roth considers Diti and Aditi of V. 62. 8 as 'the eternal and the perishable' and Muir as 'the entire aggregate of visible nature'. Sāyana has considered them as the indivisible earth and the separate creatures on it. In one other place (IV. 2. 11) where the two terms are mentioned together, they do not seem to refer to the two goddesses in question, but rather means a 'giver' and 'non-giver' as explained by Sāyana and followed by Macdonell (Vedic Mythology, p. 123). Roth interprets them as 'wealth and penury'. As regards Aditi, Max Müller regards her to represent 'the visible infinite, visible by the naked eye, the endless expanse, beyond the earth, beyond the clouds, beyond the sky (Rigveda, translation, I. p. 230). Roth at first considered her to mean 'inviolability, imperishableness' and later on as the goddess of 'eternity', the principle which sustains the *Ādityas*, or imperishable celestial light. Pischel and Hardy take her to represent the earth. Colinet considers her as the female counterpart of Dyaus. Macdonell discusses at length (Vedic Mythology, p. 122) the nature of the goddess Aditi. He considers the two characteristics, or at least the only prominent ones, of Aditi are her motherhood and 'her power of releasing from the bonds of physical suffering and moral guilt' (also accepted by Wallis and Oldenberg). He suggests that the term *aditi* in the phrases *aditeh putrāḥ*, sons of Aditi, might have originally meant 'freedom' and ultimately led to the idea of motherhood. He cites, as examples, the terms *śavasah*, son of might, and *Śacipati*, lord of might. I am, however, more inclined to think that the idea was originally that of a vast boundless space on which the stars and other luminous bodies were distributed and hence taken to be her sons, or that the wide distribution of the celestial bodies on the firmament led to the idea of a vast boundless space on which they are scattered or held together. As regards the second characteristic, namely the power of releasing from the bonds of physical suffering and moral guilt, we do not find that the attribute is solely confined to Aditi, for the same attribute, more or less in the same form, has also been assigned to many other deities who have been invoked for such relief.

I shall now express my own views of the physical nature of Diti and Aditi—as Vedic deities, and omitting the other significances in which the terms have been used.

First, regarding Aditi. We know that a number of stars form an asterism or *nakṣatra* ; and twenty-seven (formerly

twenty-eight) nakṣatras comprise the Zodiacal circle of 360°. This circle extends north and south of the ecliptic for a few degrees. In the ancient astronomical treatises, viz., Āra-jyotiṣa (AJ¹), Yājuṣa-jyotiṣa (YJ), Pitāmaha-siddhānta (PS), Vṛddhavāsistha-siddhānta (VS), Brahma-siddhānta (BS), Soma-siddhānta (SS), and Sūrya-siddhānta (SuS), we find the names of certain deities (most of which have been included in the list of Ādityas) connected with the asterisms. In the first two treatises we find the names of deities (or one or more syllables of their names) used in place of the usual names of the asterisms, or else the deities have been called the presiding gods of the asterisms. In the other works we find the names of the deities in place of the asterisms. We append below two lists, one of the deities with the asterisms arranged in an alphabetic order and another of the asterisms with their presiding gods in a serial order.

1. List of Deities with their connected asterisms.

Agni, lord of Kṛttikā (Junction star Alcyon): AJ. 25, YJ. 32 (as lord of the asterism); VS. 8. 7 (Agni in place of the name Kṛttikā); SS. 4. 6. 7.; 4. 6. 34 (Āgneya in place of the name Kṛttikā); SuS. 8. 18.

Aja Ekapāt, lord of Pūrvaprosthapada (or Pūrvabhādrapada) (Junction star α Pegasi): AJ. 9 (Aja for the asterism), 14 (the abbreviation *ja* for the asterism), 27 (as the presiding deity of the asterism); YJ. 10, 18, 34; PS. (Aja for the asterism); VS. 8. 8 (Ajapada for the asterism).

Aditi or Āditya, lady or lord of Punarvasu (Junction star Pollux): AJ. 25, YJ. 32 (as lord of the asterism); VS. 8. 18 (called Aditi); SS. 4. 6. 35 (called Āditya); SuS. 8. 19.

Aryaman, lord of Uttarahālguni (Junction star β Leonis): AJ. 14 (abbreviation *mā* for the asterism), 27 (as the presiding deity); YJ. 18, 32; PS. (called Aryamā); VS. 8. 18 (called Aryamā).

Āsvins, lord of Āsvini (Junction star α, β or γ Arietis): AJ. 14 (the abbreviation *jyau* for the asterism), 27 (as the presiding deity of the asterism); YJ. 18, 34; VS. 8. 19 (*Dasra* in place of the name of the asterism).

Ahribudhna, lord of Uttarahādrapada (Junction star α Andromedæ or β Pegasi): AJ. 14 (the abbreviation *hir* for the asterism), 27 (as the presiding deity); YJ. 18, 34; PS. (asterism called Ahribudhna); VS. 8. 18 (asterism called Ahribudhna).

Āpaḥ, lord of Pūrvāśādhā (Junction star δ Sagittarius): AJ. 9 (asterism named *jalah*), 14 (the abbreviation *pa* for the asterism), 26 (as the presiding deity); YJ. 10, 18, 33; PS.

¹ Abbreviations used in the list of Deities.

(asterism Āpa); BS. 2-178; SS. 4. 6. 4, 12; SuS. 8. 21 (called Āpa in all the three works).

Indra, lord of Jyesthā (Junction star Antares): AJ. 26, YJ. 33 (as the presiding deity): PS. (asterism called Indra).

Indrāgni, lord of Viśākhā (Junction star α Libera): A.J. 26, YJ. 33 (as the presiding deity of the asterism).

Tvaṣṭr, lord of Citrā (Junction star Spica): AJ. 9 (asterism called Tvaṣṭā), 26 (as the presiding deity): YJ. 10, 33.

Dhātṛ (called Yama by Somākara, the commentator on Yājusajyotiṣa), lord of Uttarahālguni (Junction star β Leonis): AJ. 9; YJ. 10.

Nirti, lord of Mūlā (Junction star λ Scorpionis): AJ. 26, YJ. 33 (as the presiding deity).

Pitarah, lords of Maghā (Junction star Regulus): AJ. 25; YJ. 32 (as the presiding deity of the asterism); VS. 8. 21; SS. 4. 6. 34; SuS. 8. 18 (called Pitṛ in the last three treatises).

Pūṣan, lord of Revati (Junction star ξ Piscium): AJ. 27 (as the presiding deity); YJ. 34; SS., SuS. Pausṇa.

Prajāpati (or Kah), lord of Rohiṇi (Junction star Aldebaran): AJ. 25 (as the presiding deity); YJ. 32; VS. 8. 11; BS. 2. 176; SS. 4. 6. 11; SuS. 8. 20 (asterism named Prajāpati in the last four works).

Bhaga, lord of Pūrva-phālgunī (Junction star δ Leonis): AJ. 14 (*ga* as the abbreviation), 25; YJ. 18, 32 (as the presiding deity); PS. (asterism called Bhāgya): VS. 8. 8, 18 (asterism called Bhaga).

Mitra, lord of Anurādhā (Junction star β or δ Scorpionis): AJ. 9 (asterism called Mitra), 26 (as the presiding deity); PS. (asterism called Maitra); SS. 4. 6; SuS. 8. 18 (also called Maitra in the last two works).

Yama, lord of Bharanī (Junction star 35 Arietis): AJ. 27 (as the presiding deity); YJ. 34; SS. 4. 6. 9 (called Yamalā).

Rudra (or Bhava), lord of Ārdṛā (Junction star α Orionis): AJ. 9 (called Bhava), 25 (Rudra as the presiding deity); YJ. 10, 32; SS. 4. 6. 7 (called Rudra).

Varuṇa, lord of Śatabhiṣā (Junction star λ Aquarii): AJ. 27 (as the presiding deity); YJ. 38; PS.; VS. 2. 174 (Vāruṇa in the last two works).

Vasus, lords of Dhanīṣṭhā (Junction star α or β Delphini): AJ. 9 (called Vasu), 27 (as the presiding deity); YJ. 10, 34.

Vāyu, lord of Svātī (Junction star Arcturus): AJ. 26 (as the presiding deity); YJ. 33; BS. 2. 167.

Viṣṇu, lord of Śravaṇā (Junction star Altair): AJ. 27 (as the presiding deity); YJ. 34; BS. 2. 179, 180 (the asterism or perhaps Altair is called Viṣṇutārā).

Viśve Devāḥ, lords of Uttaraśādhā (Junction star ϕ or τ Sagittarius): AJ. 14 (*Śve* as the abbreviation of the name), 26 (as the presiding deity); YJ. 18, 33; PS. (called Vaiśvadeva); SS. 4. 6. 4 (called Vaiśva).

Brhaspati, lord of Pūṣyā (Junction star δ Canceri): AJ. 25 (the presiding deity); YJ. 32; SS. 4. 6. 34; SuS. 8. 18 (Bārhaspatya in SS. and SuS.).

Savitṛ, lord of Hastā (Junction star γ or δ Corvi): AJ. 26 (the presiding deity); YJ. 33.

Soma, lord of Mṛgaśīrā (Junction star λ Orionis): AJ. 26, YJ. 32 (the presiding deity).

2. List of the Nakṣatras with their presiding Deities.

(1) Aśvinī [also named Dasra (VS)]; abbreviation *jyau* (AJ., YJ.). Presiding deities the Aśvins.

(2) Bharanī (also called Yamalā). Presiding deity Yama.

(3) Kṛttikā (also called Agni, Āgneya). Pr. d. Agni.

(4) Rohinī (also called Prajāpati). Pr. d. Prajāpati (Kaḥ).

(5) Mṛgaśīrā. Pr. d. Soma.

(6) Ārdrā (also called Bhava, Rudra). Pr. d. Rudra.

(7) Punarvasu (also called Aditi, Āditya). Pr. d. Aditi (or Aditya).

(8) Pūṣyā (also called Bārhaspatya). Pr. d. Brhaspati.

(9) Aśleṣā (also called Sarpa).

(10) Maghā (also called Pitar). Pr. d. Pitarah.

(11) Pūrva-phālgunī (also called Bhaga, Bhāgya, *ga* as abbreviation). Pr. d. Bhaga.

(12) Uttara-phālgunī (also called Dhātār in AJ. and YJ., Aryamā). Pr. d. Aryaman.

(13) Hastā. Pr. d. Savitr.

(14) Citrā. Pr. d. Tvastr.

(15) Svātī. Pr. d. Vāyu.

(16) Viśākhā. Pr. d. Indrāgni.

(17) Anurādhā (also called Mitra, Maitra). Pr. d. Mitra.

(18) Jyesthā (also called Indra). Pr. d. Indra.

(19) Mūlā. Pr. d. Nirrti.

(20) Pūrvāṣādhā (also called Āpa, Jala, *pa* as an abbreviation). Pr. d. Āpa.

(21) Uttarāṣādhā (also called Vaiśva, Vaiśva Deva; *sve* as an abbreviation). Pr. d. Viśve Devāh.

(22) Śravaṇā. Pr. d. Viṣṇu.

(23) Dhaniṣṭhā (also called Vasu). Pr. d. Vasus.

(24) Śatabhiṣā (also called Vāruṇa). Pr. d. Varuṇa.

(25) Pūrva-bhādrapada (also called Aja, Ajapada), *ja* as an abbreviation). Pr. d. Aja Ekapād.

(26) Uttara-bhādrapada (also called Ahirbudhna, Āhirbudhna, *hir* as an abbreviation). Pr. d. Ahirbudhna.

(27) Revatī (also called Pauṣṇa). Pr. d. Pūṣan.

From the above two lists we may conclude that most of the asterisms at an early period were known by names assigned to what became their presiding deities. Further, the signi-

ficance of the names of and the various attributes assigned to these deities may be supposed to have been derived from the various physical phenomena observed by the Vedic sages and correlated with the rising of groups of stars or asterisms, perhaps at dawn. As more and more of the asterisms came to be recognized, more and more deities were created and named after the physical phenomena noticed with their risings. Hence we may reasonably suppose that the Ādityas, or most of them at least, represented a group of stars or asterisms, including as well the large luminous bodies, as the sun and the moon. We may thus account for the gradual increase of their number, even exceeding twelve and reaching nearly the number of the nakṣatras. Thus, the Ādityas are ultimately to be taken as the luminous bodies of the heaven. Considering that some of the Ādityas recognized at an early period were called the sons of Aditi and others, by their name, signify (luminous) bodies situated on (or pertaining to) Aditi, we may take Aditi to represent the celestial dome (sphere) studded with stars. Lastly, taking Diti as the counterpart of Aditi, that the Ādityas are all confined to the Zodiac and the northern hemisphere and that the Ādityas are opposed (as enemies) to the Daityas, we may take *Aditi to represent the northern hemisphere and the Zodiacal signs* (the part of the heaven which could be seen from the latitude of the North-West India throughout the year) and *Diti to represent the limited, visible portion of the southern hemisphere of the heaven.*

All the characteristics of Aditi can be well interpreted if we take this view. Her quick and not-going-backward movement indicates the apparent rotation of the celestial sphere from east to west round the axis passing through the poles. The direction of the movement never changes.

In conclusion, we may consider a few passages dealing with the creation of the sun and other luminous celestial bodies. Here the term *aditi* seems to have been used in different senses, but perhaps still keeping to the idea of vastness (of space). We shall, here, try with reserve to interpret the meanings of the words used in this connection. The origin of the existent (*sat*) from the non-existent (*asat*) seems to be the first step in the creation. It perhaps points to the early philosophical conception of the origin of the universe. *Āśā* seems to represent the wide unfathomable space (perhaps beyond human conception). *Uttānapād* is certainly not the same of the Pauranic or later literature and identified with β Ursæ minoris by Roth (in his *Wörterbuch*); it probably represents (so far as we can surmise from the significance of the term) the higher layers of space now less boundless (or more circumscribed). *Bhū* seems to indicate a space the existence of which can be well conceived in our mind (probably corresponding to the *ether* of modern science). The second *āśā*, arising from *bhū*,

seems to indicate a space which can be determined by our senses. It seems to be identical with the first *aditi* from which *dakṣa* had his origin. So far as we can interpret the significance of *dakṣa*, it seems to indicate the space where energy (perhaps in the form of luminous particles) has appeared. The second *aditi* arising from *dakṣa*, seems to be the one widely recognized by the Vedic sages; she has given origin to the *Ādityas* (the luminous bodies). Here we should take her to represent the whole celestial sphere (as the counterpart *Diti* does not seem to have been taken into account). We further see that the Pauranik *Dakṣa* takes the place of the second *aditi* and represents the celestial sphere, his daughters representing the lunar mansions and the constellations of the northern hemisphere. A scholar named Binod Bihari Ray, in his work 'The Universe', has interpreted these passages in the light of the five physical elements—earth (*kṣiti*), water (*ap*), fire (*tejah*), air (*marut*), and sky (*vyoma*). He takes *āśā* for the sky, *uttānapad* for air, *bhū* for *tejah*, *dakṣa* for water, and *aditi* for earth (solid matter). Although the idea of creation from the five physical elements was in vogue at a later period, we cannot apply the same idea here, the great drawback being the six elements we have here in place of five. Thus the present hypothesis of the creation of the universe is different from that developed at a much later period.

III. CELESTIAL EQUATOR. EQUINOXES AND SOLSTICES.
SUN'S NORTHWARD AND DOWNWARD SHIFTING
IN A YEAR.

1. *Trita and Viśvarūpa.*

Trita.—Trita is a minor deity of Rigveda. No particular hymns are dedicated to him ; but he is mentioned incidentally in some twenty-nine hymns, where his name is scattered through different passages (*rks*).

He is sometimes called by the name of *Trita Āptya* (Trita of the waters) or only by the name of *Aptya* (I. 105. 9 ; V. 41. 9 ; VIII. 47. 14 ; X. 8. 8). Again we get the mention of a sage named *Trita Vaibhuvasaḥ* (X. 46. 3) who is said to have obtained fire on the ground. In many places (X. 46. 6 ; X. 115. 4 ; etc.), Agni has been qualified as *trita*, that is, with three forms. *Trita Āptya* also appears in the personification of a sage and several hymns are assigned to him (I. 105 ; VIII. 47 ; IX. 33-4 ; 102 ; X. 1-7).

Trita is associated or mentioned with several other deities. He is closely associated with Indra, and we shall study this association later. He is closely related to Soma ; we shall follow the relationship in connection with Trita's works. Trita is connected with Agni (celestial fire—the sun ?) in several ways, which we shall discuss below. Trita is mentioned with the Maruts (II. 34. 10 ; V. 54. 2 ; VIII. 7. 24 ; etc.). We are told that the Maruts killed the enemies of Trita (II. 34. 10). When the Maruts, having harnessed their steeds, traverse every place and meet the lightening, Trita roars and widespread showers of rain fall to the ground (V. 54. 2). Further, the Maruts preserved the strength of Trita (VIII. 7. 24). Trita is further mentioned as holding Varuṇa in the sea (IX. 95. 4). Lastly, we find that the Vāyus (winds) asked the help of Trita (X. 115. 4).

We do not find any suggestions or statements regarding his physical characteristics. We are told of his iron-pointed shaft (X. 99. 6) and his arrows (II. 11. 20) ; we are also told that he slew Viśvarūpa with his weapons (X. 8. 8). Trita has been praised as a raingiver, as one like the womb of the firmament and as the grandson of waters. All we know about the place of Trita is that his abode is secret (IX. 102. 2) and is in the heaven (V. 9. 5 ; V. 41. 4).

We now consider the works attributed to Trita. Firstly, the slaying of Vṛtra. He is closely associated with Indra in his work. He cleft the joints of Vṛtra by the strength of the

food (the Soma beverage) (I. 187. 1). Again we are told that he helped Indra in his fight with Vṛtra and in giving this assistance he was further aided by the Maruts (VIII. 7. 24). Further Indra seized the cows from Ahi and gave them to Trita (X. 48. 2). Ahi seems to be identical with Vṛtra. In this conflict with Vṛtra, Indra acted according to the will of Trita (VIII. 52. 1). Secondly, the slaying of Viśvarūpa. Urged by Indra and knowing his paternal weapons Trita slew Viśvarūpa, the three-headed, seven-rayed son of Tvaṣṭr (X. 8. 8). Viśvarūpa was delivered by Indra to Trita (II. 11. 19). The same feat is also attributed to Indra himself elsewhere (II. 11. 19; X. 8. 9). Indra, while subduing the Dāsa, also subdued the three-headed six-eyed; Trita, empowered by the vigour of Indra, killed the boar by his finger-tips which are as sharp as the iron (the iron-tipped shaft) (X. 99. 6). Thirdly, the breaking of the fence (*paridhi*) of Vala. Trita cleft the fence (*paridhi*) of Vala (I. 52. 4, 5). Again we are told that Indra strengthened by the Soma-pressing Trita, possessed of good arrows, cast down Arbuda and with the Agnirasas rent Vala (II. 11. 20). Fourthly, Trita's work in connection with Soma. We are informed of Trita as a preparer of Soma (II. 11. 20; IX. 32. 2; IX. 38. 2; etc.) and as a purifier of the same (IX. 34. 4). Trita's maidens (fingers according to Sayana) urge the tawny-coloured Soma-juice with the stones for Indra (IX. 32. 2; IX. 38. 2). Trita becomes drunk with Soma-juice (VIII. 12, 16). In this connection we should note a few passages on Soma. Soma lies in the secret place near the two pressing stones of Trita (IX. 102. 2). Soma caused the sun along with the sisters (*jāmiviḥ*; or by growth, by increase in strength) to shine on the top of Trita (IX. 37. 4). Soma placed in Trita nourishes Indra situated in the sky (IX. 95. 4). Again we are told that (as if) Soma has created the name of Trita (IX. 86. 20). Indra drank Soma beside Manu, Vivasvat, and Trita (Vāḷakhilya 4. 1). Fifthly, we are told that Trita harnessed a steed given by Yama; Indra mounted the steed first. This steed was united with Yama, Āditya, and Trita by a secret operation. Sixthly, Trita blows upon the rising flame of Agni like a smelter and sharpens (strengthens) him as in a smelting furnace (V. 9. 5). Trita, eagerly seeking Agni, found him on the head of the cow. Trita surrounded by flames seated himself within his place (X. 46. 3, 6).

We are also informed of several other facts about Trita. First, Trita fell into a well and prayed to the gods for help: Brhaspati released him (I. 105. 17). While within the pit, Trita prayed to his father and went forth claiming his paternal weapons (X. 8. 7) with which he fought with Viśvarūpa. Secondly, Trita, to gain his ends, turned round the five principal knots together by his circle (*Cakra*). Thirdly, Trita knows the existence of the seven rays to which his navel is

extended (connected) and was praying to them to get out of the pit (I. 105. 9). Fourthly, the horse killed in the horse-sacrifice is said to stay with Yama, Āditya, and Trita (I. 163. 3). This horse is said to be tied to heaven in three places. Fifthly, Ādityas and Ūśās are prayed to transfer ill deeds and evil dreams to Trita (VIII. 47. 13-17); such an idea is also suggested vaguely in Atharvaveda, where it is mentioned that the guilt or dream is transferred to Trita.

Trita is also mentioned in other Vedic literatures. In Taittiriya Saṃhitā (I. 8, 10. 2), Trita is considered to be the bestower of long life. We find this mentioned in several other treatises in association with Ekata and Dvita, as noted below.

The three deities, Ekata, Dvita, and Trita are closely associated. We do not find the word Ekata in the Rigveda, but the term Dvita occurs in the Rigveda as the name of a sage who is called Dvita Aptya (IX. 103). There is another sage who has been called Dvita Mr̥ktavāhā of Atri family (V. 18). All the three names, Ekata, Dvita, and Trita are found together in Taittiriya Saṃhitā (I. 8, 10. 2), Vājasaneyi Saṃhitā (I. 23), Taittiriya Brāhmaṇa (III. 2, 8, 10-11), and Śatapatha Brāhmaṇa (I. 2, 3. 1). Sayana, in his Introduction to Rigveda I. 105, says that, according to the Sātyānas, Ekata, Dvita, and Trita were in ancient times three sages; once upon a time they were in a desert and having felt thirsty came to a well. Trita entered into the well to drink the water and also brought water out of the well for the other two. These two sages, after they have had drunk the water, seized the money of Trita, threw him into the well, covered the mouth of the well with the wheel of a chariot, and went away. Trita prayed to the gods in his mind to get him out of the well. Having seen the moonlight inside the well at night, he worshipped the gods. Yāska in his Nirukta (IV. 6) explains the word *trita* as meaning 'very proficient in wisdom' and as a numeral referring to one of the three brothers, Ekata, Dvita, and Trita. In another place (IX. 25) he considers Trita as 'Indra in three abodes' (that is, heaven, earth, and air). Lastly, we have the mention of three deities in Mahābhārata (XII, 12,772), where they are called the desired (*mānasa*) sons of Brahmā.

We have references to Trita in the Avesta, where he appears as Thrīta and Thraetaona, perhaps as two distinct persons (?). Thrīta (Yasna IX) was the third person in the corporeal world who prepared Haoma (Soma), the others being Vivanhvant (Vivasvat) the first, Āthwya (Āptya) the second, and Pouruśhāspa (Parucchepa ?) the fourth. Thrīta had two sons (Vendidād I. 68, 69). Thraetaona was born to help Varina (Varuṇa ?) with four corners and killed the serpent Dahāka (Dāsa). In another place (Khorda Avesta XXI, 33), Thraetaona is mentioned as Varena, the four-cornered. The Dahāka (Khorda Avesta XXI.

34), the snake, has three jaws, six strong eyes, and of thousand-fold strength.

Viśvarūpa. The word occurs some twenty times in the Rigveda. Except in four passages (II. 11, 19; X. 8, 8-9; X. 99. 6.), the term has been used to qualify various deities (as, the Sun, the Maruts, Tvastr, Bṛhaspati, etc.) and perhaps means 'omniform' or 'having the sum-total of the world's beauty'. In the above-mentioned four passages we have the indication of a story in which *Viśvarūpa* appears with a distinct personality.

Viśvarūpa is the son of Tvastr (II. 11, 19). He had three heads (X. 8. 8; X. 99. 6), six eyes (X. 99. 6), and seven rays (X. 8. 8).

We are informed of the conflict between *Viśvarūpa* on one side and Indra and Trita on the other. Indra killed *Viśvarūpa* to gain the friendship of Trita (II. 11, 19). In another place we are told that Indra raised a loud noise around the cattle of *Viśvarūpa* and cut down the demon's head looking upwards and full of glory and valour. His three heads hang down. Again we are told (X. 99. 6) that Indra struck the roaring demon (*dāsa*) and to subdue the three-headed and six-eyed one, lent his might to Trita who tore the boar into pieces with his sharp-nailed fingers. Lastly (X. 8. 8), we are informed that Trita *Āptya*, sent by Indra, killed the three-headed, seven-rayed one.

The above-mentioned story has been much expanded in Taittiriya Samhitā (II. 5. 1), Maitrāyaṇi Samhitā (II. 4. 1), Kāthaka Samhitā (XII. 10), and Śatapatha Brāhmaṇa (I. 2, 3. 2; I. 6. 3. 1-5; V. 5. 4. 2-6). The bodily characteristics of *Viśvarūpa* have also been described in the last-named work (I. 7. 3. 1; V. 5. 4. 2) as having three heads, six eyes, three faces, and similar (that is, similarly peculiar) form. Of the three heads of *Viśvarūpa*, one used to drink Soma, one wine, and one used to eat food. When Indra cut off the three heads, the first one became a hazelcock, the second a sparrow, and the third a partridge.

I shall now deal with the views of oriental scholars on the physical nature of Trita and *Viśvarūpa*.

Macdonell (*Journ. Royal Asiatic Soc.* for 1893, pp. 419-496; *Vedic Mythology*, p. 69) has discussed at length the views of various scholars and has advanced one of his own. We may briefly enumerate them here. A. Kuhn (1846), depending upon a small portion of the Rigveda then published, thought that Trita was identical with Indra. Roth (1848) came to the conclusion that Trita is a water and wind (*Vāyu*) god. Myrianthus (1876) thought Trita and his successor Indra to be 'a designation of the sky'. Ludwig was inclined to identify Trita with Vāyu and sometimes with Soma. Bergaigne identified Trita in his origin partly with the celestial Agni and partly with the celestial Soma. Pischel at first thought that Trita

was a god of the sea and waters ; later he took Trita to be originally a human healer who was subsequently deified. Hillebrandt regarded Trita as a deity of the bright sky. Perry believed him to be a god of the storm, older than Indra. Hardy took him to be a moon-god. Macdonell regarded Trita as the god of lightening or 'the aerial form of fire, originally the middle member of the triad Agni, Vāyu or Indra, Sūrya. Plunket (*Ancient Calendars and Constellations*, pp. 176-7) regarded Trita as a 'personification of the third of the moon's course through the constellations of the Zodiac at the season of the summer solstice (in Aquarius or in Piscis, sometimes indeed at the junction of these constellations)'.

Coming to Viśvarūpa we find that Kālinath Mukherji is his *Popular Hindu Astronomy*, pp. 125, 139, suggested that Viśvarūpa is the constellation Orion (Kāla-puruṣa). He regarded the three prominent stars in the head of the Orion as the three heads of Viśvarūpa.

I shall now discuss the physical nature of Trita and Viśvarūpa and shall express my own views. We find that the latter has been described as a serpent with three heads, six eyes, seven rays, and of thousandfold strength (in the Avesta and Rigveda). Hence we cannot identify him with Orion. We know that from ancient times a large snake-like constellation figure has been recognised on the south of the ecliptic (the sun's apparent circular path in the heaven) sweeping over nearly one-fourth the entire circle of the heaven and lying beneath the Zodiacal constellations Cancer, Leo, and Virgo. This is named *Hydra*. The posterior part of its body lies beneath *Citrā* (Spica), the presiding deity of which is Tvaṣṭr, the father of Viśvarūpa. The number of heads of the Hydra has been variously counted from 7, 9, several to 100, according to various records and legends (Brown's *Primitive Constellations*, Vol. I, pp. 104-5). It is the storm and ocean-monster of the ancients and has been also called the water-snake. From these evidences we are inclined to identify Viśvarūpa as the constellation Hydra.

Coming to Trita, we find that he is closely associated with Indra, Soma, Agni, Maruts, and Vāyu, and hence he cannot be identified with any of them. There is, however, sufficient evidence for the belief, already held by the oriental scholars, that some of the feats attributed to Trita in the Avesta and in the earlier hymns of the Rigveda have been transferred to Indra in the later hymns of the latter work and that Trita has been thrown into the background. That Trita is closely connected with the rains in the season of the summer solstice is clearly shown by his association with Indra (who is evidently the presiding deity of the summer solstice—Plunket, *Ancient Calendars and Constellations*, pp. 115) particularly in the slaying of Vṛtra (either a personification of the cloud, as held by most of the authorities, or the constellation *Hydra* according to

Plunket), Maruts and Vāyu, as well as with the thunderstorm and downpour of rains. Further, considering his abode in the heaven, the position of the sun on his top, and his slaying of Viśvarūpa (Hydra), we can definitely assign his place to that part of the heaven which lies beneath the summer solstice in the ecliptic in close connection with the Hydra. When one thinks of the three brothers, Ekata, Dvita, and Trita and of Trita's *cakra*, one is inclined to entertain the idea that they form together a complete circle, each representing its one-third. Taking into account the close connection of Trita with the rainy season and finding that he has two other brothers, I think it probable that the three brothers are in someway connected with three seasons, recognised in the early Vedic period. Plunket also holds the view that the three form a circle and he considers that Trita represents one-third of the circular path of the moon. Trita's close association with Soma (which he takes as the moon) has led Plunket to arrive at such a conclusion. But I am unable to adhere to his view and am led to the conclusion that Trita represents one-third part of the equator connected with and lying beneath the summer solstice for the following reasons: (i) Trita's slaying the Viśvarūpa. This is easily explained if we think that the equator was passing through the constellation figure Hydra. This actually happened sometime about 3000 B.C., when the equator passed through the neck of the figure. (ii) Trita's fall into a pit. This statement can be reconciled if we remember that half the equator is placed beneath (on the south of) that half of the ecliptic which has the summer solstice in the middle. This depression of the equator has been allegorically described as Trita's fall into a pit. Again all the statements concerning the close connection of Trita with Soma, on which Plunket has based his conclusion, can be reconciled for the following reason: The moon's orbit cuts the ecliptic at two points (spoken of as the *ascending* and *descending nodes*) and the plane of its orbit is inclined to the plane of the ecliptic at an angle of $5^{\circ}8'$ approximately. Again these two points are known to shift along the ecliptic and the plane of the moon's orbit is known to revolve so as to cover a complete circle of 360° in the course of $18\frac{1}{2}$ years. If we assume that, at the time of the observation, the moon's orbit was so placed between the ecliptic and equator towards the equinoctial point (perhaps autumnal equinox) that the moon in her path came close to the equation, we can interpret all the facts stated in the Rigveda on this point. The Soma-juice was evidently so correlated with the moon that what is Soma-juice to an earthly being is the moon (the celestial beverage) to the heavenly deities.

Macdonell's view that Trita is the god of lightening cannot be accepted for the same reasons as are cited above. Further we do not find any passage which directly connects him with

lightening, although he is distinctly mentioned as the rain-giver; he is connected in a general way to all the phenomena we see connected with the rains.

Some of the feats of Trita remain unexplained until we can find out the physical nature of the personalities connected with such feats.

2. *Mitra and Varuṇa.*

Mitra and Varuṇa, being closely associated in the Rigveda, are here considered together.

They are invoked together in some nineteen hymns and in about two hundred and thirteen passages in addition, with or without other deities. Mitra has been praised alone in a single hymn (III. 59) and with or without Varuṇa in about two hundred and forty-one passages. Varuṇa has been addressed alone in seven complete hymns and with Indra in seven complete and parts of two hymns. He has been altogether invoked about three hundred and fifteen times, with or without Mitra and other deities. Their wives are also mentioned in several passages (I. 22. 12; I. 109. 2). They are associated with Aryaman in a large number of passages.

There are many physical features attributed to Mitra and Varuṇa. They are visible (I. 38. 13; V. 65. 1), bright (I. 136. 4; II. 27. 2; V. 67. 1; VII. 66. 17; etc.), full of strength (III. 59. 8; VI. 48. 1; VII. 66. 2; etc.), producers of sound (X. 102. 7) and fire-tongued (VII. 66. 10). They are emperors (V. 63. 2, 3; VIII. 25. 4). Their brightness illuminates the heaven and earth and sky. They are unequal (*asama*) (VI. 67. 1).

We are informed of Varuṇa's traits. He is irritable (IV. 41. 4), orderly (*dhr̥tavrata*) (I. 141. 9; II. 1. 4; etc.) and white in colour (VIII. 41. 9; etc.). We are told of Varuṇa's wrath (I. 24. 6; VII. 84. 2; etc.). Agni is invoked for relief from Varuṇa's wrath (IV. 1, 4) and from Varuṇa's mischief (I. 128. 7). Soma and Rudra have been invoked to save from Varuṇa's trap (VI. 74. 4). Varuṇa's garments are all golden (I. 25. 13). Varuṇa and Indra are friendly to each other (V. 41. 3).

Mitra and Varuṇa are Ādityas (I. 14. 3; II. 27. 2, 6; etc.); they are Āditi's sons (VIII. 25. 2; X. 36. 3); Āditi gave birth to them (VIII. 25. 3). Varuṇa has seven sisters, of whom he is in the middle (VIII. 41. 2; VIII. 59. 4). Vibhṛā (one of the Rbhus) belongs to Varuṇa (IV. 33. 9). Varuṇa is Agni's brother and friend (IV. 1, 2, 3). Dawn is Varuṇa's sister (I. 123. 5). Varuṇa and the sun follow the regulations of Indra (I. 101. 3). We are told of Mitra and Varuṇa's messengers (VI. 67. 5; VII. 61. 3). Varuṇa's messengers sit down around him (I. 27. 13). Varuṇa's messengers are thousand-eyed (Atharvaveda IV. 16. 4). Varuṇa, again, is the horse of the sacrifice (I. 163. 4).

Mitra and Varuna always travel in the same chariot (V. 62. 2). They remain in the highest region in their chariot (V. 63. 1). Their chariot is golden with metallic pegs (V. 62. 8); it remains in the sky, shining like lightening (V. 62. 7). Varuna's steed is of a tawny colour (V. 62. 7).

Mitra and Varuna live in the heaven (I. 137. 1); their abode is old (VIII. 25. 17), golden (I. 136. 2.) and very lofty (VII. 88. 5); their house has a thousand doors (VII. 88. 5). The sun, rising from his place, goes to the abodes of Mitra and Varuna (I. 152. 4; VII. 60. 1, 3).

Let us now consider the usual works of Mitra and Varuna—
 (1) Mitra and Varuna, like several other deities, are closely connected with the heaven and earth and sky. They hold the three worlds (III. 59. 1; V. 69. 1; X. 132. 2; etc.). They have separately fixed the heaven and earth by their strength (VII. 61. 4). With Aryaman, they support the three grounds (three regions of the earth) and three (regions of the) heavens (II. 27. 8). Mitra and Varuna point out the path to the heaven (V. 64. 1). Varuna made the sky spread all round (V. 85. 2). Varuna has measured the extent of the earth (VIII. 42. 1).
 (2) Mitra and Varuna are the regulators of time. With Aryaman, they have established the autumn (year), month, and day and night (VII. 66. 11); with Indra and Agni, they originated the day (V. 49. 3). Dawn is, so to say, the lustre of Mitra and Varuna (III. 61. 7). Mitra destroys the darkness (I. 141. 9). Varuna knows the twelve months and knows how the months originate (I. 25. 8). Varuna makes his own lustre white and black (that is, originates the day and night) (VIII. 41. 10). He embraces the night (VIII. 41. 3). He makes three dawns grow (VIII. 41. 3). Everyday, the dawns are placed in front of the place of Varuna at a distance (the rate) of thirty *yojanas* (I. 123. 8). He speaks of twenty-one names of the cow (VII. 87. 4).
 (3) Mitra and Varuna are regarded as the givers of rain. They are lords of water (VII. 64. 1). They cover the mountains with clouds (V. 85. 4). They keep the sun hidden with cloud (V. 63. 4). They cause the downpour of rain (V. 63. 1; V. 68. 2, 5) and cause the rivers to flow (V. 62. 4). They soak the pasture grounds (VII. 62. 5). They make the annuals grow and fatten the cows (V. 62. 3). Indra's thunderbolt gives pleasure to Mitra and Varuna. Varuna, again, is regarded as the lord of water (VII. 49. 3). He is the originator of water (VII. 87. 6) and has distributed sky-born water to all (VII. 87. 1). Varuna has hundreds of thousands of medicinal herbs (I. 24. 9). He soaks all the grounds (V. 85. 3). Indra and Varuna fill up the dry rivers with water (VII. 82. 4). In one passage (V. 69. 2), three bright ones are said to be carriers of water (*retodhāh*) and givers of rain; they live in their own abodes. They seem to be Mitra, Indra, and Varuna.
 (4) Mitra and Varuna are closely connected to the

sun. The sun is regarded as their eyes (VI. 51. 1; VII. 61. 1; X. 37. 1; etc.) as also representing the eyes of Mitra, Varuṇa, and Agni (I. 115. 1). Again, the sun is Varuṇa himself (I. 50. 6). The sun is their friend (I. 152. 4) and is as if it were their weapon (V. 63. 4). Mitra and Varuṇa exhibit their brightness in the sun's abode (VIII. 28. 19); they increase the sun's brightness (V. 62. 2). They hold the sun in the sky (V. 63. 7; V. 66. 2). The sun exhibits his bright form to make Mitra and Varuṇa visible (I. 115. 5). The sun's motion and setting are the works of Mitra and Varuṇa (III. 55. 6). When the sun rises in the morning, Mitra and Varuṇa, riding on their chariot, look at Diti and Aditi (V. 62. 8). Agni is called Mitra and Varuṇa (VI. 12. 3). Mitra and Varuṇa spread light all round (X. 31. 9). Again, Varuṇa is said to hold his brightness high up in the sky (I. 24. 7). He fashioned the sun for brightness (VII. 87. 5). Varuṇa surrounds his well-nourished body with golden garments and spreads his golden rays all round (I. 25. 13). Varuṇa arranged for the sun's path and separated the days and nights from one another (I. 24. 8; VII. 87. 1). Varuṇa, with Indra, made the sun move in the sky (VII. 82. 3). Lastly, Varuṇa measured the sky with the sun like a balance (V. 85. 5); he fashioned the sun in the sky for brightness, like a balance (VII. 87. 5). Viṣṇu, again, is said to have his three steps by the laws of Mitra for Indra (VIII. 52. 3).

We should also consider some minor deeds of Mitra and Varuṇa. (1) They became four-cornered (provided with four weapons—*Sāyaṇa*) killed the three-cornered (three-weaponed) one (V. 152. 2). (2) Varuṇa holds the directions on the earth (VIII. 41. 2); he extends to (all) the directions (VIII. 41. 2). (3) It is by Varuṇa's order, that the moon shines at night (I. 24. 10). (4) Mitra and Varuṇa hold *Dadhikrā* (IV. 31. 2, 5).

Lastly, there are several myths connected with Mitra and Varuṇa. (1) They know the *Aśvins* (VI. 62. 9). (2) When *Purukutsa*, the son of *Durgaha*, was imprisoned (killed?), the seven sages (*saptarṣis*) became the lords of the country. *Purukutsa*'s wife performed a sacrifice for Indra and Varuṇa and was gifted with a son, *Trasadasyu* (IV. 42. 8, 9). (3) When *Śunaḥśepa* was bound down to three wooden pillars, he prayed Varuṇa to release him by loosening the ties above, below and in the middle. He got free (I. 24. 13-15). There is a detailed account of *Śunaḥśepa* in *Aitareya Brāhmaṇa*. (4) Mitra and Varuṇa, invoked in a sacrifice, placed their seminal fluid inside a pitcher; from inside this came out *Māna* (measure; *Agastya*, according to *Sāyaṇa*) and *Vasiṣṭha* was born (VII. 3. 13). The semen was taken in by *Urvaśī* who gave birth to *Vasiṣṭha* (VII. 33. 11, 12); *Vasiṣṭha* threw out light like lightening; Mitra and Varuṇa looked at him. *Agastya* also brought him from (his) place. He was then born (VII. 33. 9, 10). (5) There is another

myth regarding Vasiṣṭha (VII. 88. 3, 4). Vasiṣṭha was compelled to go on a boat with Varuṇa. The boat was made to move on the sea (sky) during the day time by Varuṇa. Vasiṣṭha was happy on this boat-like swing. (6) When the king Sudāsa was attacked by ten aboriginal kings he defeated them with the help of Indra and Varuṇa (VII. 83. 7, 8).

Lastly, we find many requests to Mitra and Varuṇa. A few of these entreaties are of importance to us. They have been invoked for protection from great distress (*Vṛhadvaruṭha*) (VIII. 18. 20) and three distresses (*trivaruṭha*) (VIII. 18. 21). Indra and Varuṇa together have been invoked for progeny, fertile land, and long life (IV. 41. 6).

We find mention of Mitra and Varuṇa in the Brāhmanas. Opposing qualities have often been attributed to Mitra and Varuṇa: Mitra is right, Varuṇa left (Taitt. 1. 7. 10. 1); water (payah) is Mitra's and Soma is Varuṇa's (Śatapath. 4. 1, 4, 9); Mitra is *prāṇa*, Varuṇa is *apāna* (Śatapath. 8. 4. 2, 6; etc.); Mitra is day, Varuṇa is night (Aitareya. 4, 10); and so on. Again, Varuṇa has been called the year (*sambatsara*) (Śatapath. 4. 1, 4, 10).

In the ancient astronomical treatises, Mitra is regarded as the presiding deity of *Anurādhā nakṣatra* (Yajusa. 10, 33; Ārc. 10, 26; Soma-siddhānta 4. 6-34; Sūrya-siddhānta 8. 18) and Varuṇa is that of *Śatabhiṣā* (Yaj. 34; Ārc. 27; Brahma-siddhānta 2. 174; Pitāmaha-siddhānta). The *saptamī tithi* in connection with the *Śatabhiṣā nakṣatra* in the month of *Agrahāyana* is recognised as *Mitra-saptamī*.

Mithras is the Iranian form of the Vedic Mitra (Plunket, p. 81). He was the sun-god of the Persians and his worship was introduced into Rome about the time of the fall of the Republic. The birthday of the sun-god was kept at the winter-solstice, but the great festivities in his honour were held at the season of the spring equinox. Mithras used to be represented in sculpture as thrusting his dagger into the neck of the mystic bull. Sometimes a scorpion was made to join with Mithras in his attack upon the Bull (Plunket, pp. 61-64).

Coming to the opinion of the Vedic scholars, we see that Mitra is regarded as 'a sun-god or a god of light specially connected with the sun' (Macdonell's *Vedic Mythology*, p. 30). The physical nature of Varuṇa has been discussed in *Vedic Mythology*, pp. 27-28. 'According to the generally received opinion', Varuṇa 'is the encompassing sky'. Varuṇa later on became the god of the sea. Oldenberg regarded Varuṇa as representing the moon, but this is not accepted by Macdonell.

I shall now set forth my own views on the physical basis of Mitra and Varuṇa. We have already obtained some evidence regarding the physical nature of Mitra from our knowledge of the Persian sun-god Mithras. His representation as killing the Bull with the help of Scorpion has already been interpreted

as the sun-god coming in conjunction with the sign Taurus in the day time and at night by Scorpio, the constellation in opposition. 'This triumph of Mithras was associated traditionally—in Roman days it could only have been traditionally—with the occurrence, at a remote date, of the spring equinox during the time the sun was in conjunction with the constellation Taurus' (Plunket, p. 64). We have already seen that the birthday of Mithras used to be taken as the winter solstice during the Roman period. From our side, we see that the asterism Anurādhā, of whom Mitra is the presiding deity, is placed in the sign Scorpio. Again, the asterism Śatabhiṣā in the month of Agrahāyana is dedicated to Mitra. Taking all these facts together we may take Mitra to be the presiding deity of the winter solstice or vernal equinox. Considering that dawn is the lustre of Mitra, that Mitra destroys the darkness, that Mitra increases the brightness of the sun, that Mitra can look at both Diti and Aditi, and that Viṣṇu had three steps by the laws of Mitra, I take Mitra to be connected with the vernal equinox. Further, in his many functions, Mitra is directly opposite to Varuṇa, who appears to be the presiding deity of the autumnal equinox. We find Varuṇa to be closely connected with water and to be associated with Indra. He is also closely connected with the sun. The great fact which reveals his true nature is that he swings the sun like a balance. This is very suggestive of the equinoctial point from which the sun is known to move on either side to the solstitial points. His opposite position and nature to Mitra and his special connection with water and the growth of herbs, make me believe that he really represents the autumnal equinox or its presiding deity. All the facts which we find in connection with Mitra and Varuṇa can be very well reconciled if we accept this view. Varuṇa's irritability may refer to the distress from flood in the autumn or to the trying moist heat at this period of the year. Varuṇa's messengers seem to be the clear sky studded with stars. The same chariot for them both evidently refers to the same position of the two equinoctial points. The progress of the 'dawns daily from the abode of Varuṇa at a distance of thirty yojanas has been explained by Sāyaṇa thus: The period of dawn is that when the stars cannot be seen and the sun has not risen. It extends from 21st to 26th hours. Varuṇa is the sun. Every day the sun moves round the meru by five thousand and fifty-nine yojanas. The dawns also go ahead by thirty yojanas and hence appear in places thirty yojanas distant in front of the sun. The passage might have indicated the increase of the duration of night by the receding of the dawn and the late rising of the sun. Mitra and Varuṇa's destroying the three-cornered one by a four-cornered may mean the recognition of the four equinoctial and solstitial points in place of the three seasonal periods or

the three steps of the sun from the equinox to one solstice, one solstice to another and from the solstice back to the equinox again.

Mitra and Varuṇa's knowledge of the Aśvins may mean that the vernal equinox was placed on the asterism Aśvini at that time. The seven sages becoming the lords of the country may mean that the *saptarṣi* (Great Bear) was nearest the polar star. This happened about 3000 B.C. The story of Śunaḥśepa may indicate that the precession of the equinoxes came to be known by the sages. Śunaḥśepa may be the personification of the obliquity of the ecliptic. The three pillars may be the two solstices at the sides (summer solstice higher up and winter solstice lower down) and the equinoctial points at the same place in the middle. Freeing Śunaḥśepa by Varuṇa may indicate that the movement of the ecliptic along the equator (rather than of the equator along the ecliptic), not known before, was now recognised, at the time of the autumnal equinox. In the myth of Vasiṣṭha, Vasiṣṭha is the sun. Urvaśī is the dawn. Agastya is the star Canopus. The boat seems to be the constellation Argo of which Canopus is the most brilliant star. The pitcher seems to be the constellation figure of Aquarius. Vasiṣṭha's birth appears to be the sunrise. The whole story thus refers to the heliacal rising of Canopus at the time of the vernal or autumnal equinox. In this connection we quote the following few lines from Plunket: 'the almost upright and symmetrical position of Argo 3000 B.C. may suggest the likelihood that at that date or perhaps a few hundred years later . . . this constellation was imagined. It will be observed that all the stars of Argo, even the bright and southern Canopus at 35°N., would have been above the horizon and visible at midnight of the winter solstice. At noon of the summer solstice they would have been above the horizon, but invisible in conjunction with the sun . . .'

3. *Indra.*

Indra is the most prominent of all the deities invoked by the R̥gvedic sages. More than two hundred hymns have been dedicated to him. He is also addressed in parts of some fifty-five hymns. Further, he is mentioned in many passages that refer to other deities. Indra has been praised with Agni in eleven hymns, with R̥bhus in one hymn, with Pūṣan in one hymn, with Bṛhaspati in five hymns, with Varuṇa in ten hymns, with Vāyu in five hymns, with Viṣṇu in three hymns, and with Soma in three hymns. He has been associated with the Maruts in a large number of passages.

We are informed of many of the physical features of Indra. He has a body, with head, arms, and hands (II. 16. 2; VIII. 85. 3). His belly has been many times referred to in connection with the drinking of Soma juice (II. 16. 2; etc.). He

has two eyes (X. 96. 9). His jaw or nose has been mentioned (III. 32. 3); and he has often been called good-nosed (*suśipra*, I. 9. 3; *śiprī*, I. 81. 4; etc.). His arms are long, great and far-reaching (VI. 19. 3; VIII. 32. 10; etc.). He has tawny hair (X. 96. 3, 4; etc.) and a tawny beard (X. 96. 4). He has the most beautiful form and the ruddy brilliance of the sun (X. 112. 3). He is golden (I. 7. 2; VIII. 55. 3). He is seven-rayed (II. 12. 11) and is the lord of rays (III. 31. 4). These attributes also apply to the sun. In two hymns (II. 42, 43), the Francoline partridge has been invoked as Indra in the garb of the bird.

Many personal traits of Indra are known to us. A large number of epithets has been applied to Indra (II. 21. 1-4; etc.), mostly expressive of his great might. His *vastness* is referred to in several places (III. 30. 5; III. 46. 3; etc.).

As regards Indra's weapons, the thunderbolt is almost exclusively restricted to him. *Brhaspati* has been mentioned, once as the holder of thunderbolt (I. 40. 8) or using it for killing the enemy (II. 30. 9). The bolt was fashioned by *Tvastr* (I. 121. 12; V. 34. 2); in some other places *Uśanā* has had the same work attributed to him. (I. 121. 12; V. 34. 2). Many characteristics of the bolt are mentioned: It is metallic (*āyasa*), golden (I. 57. 2; etc.), bright (III. 44. 5) or tawny (III. 44. 4; etc.). It is four-angled (IV. 22. 2), or hundred-angled (IV. 17. 10), hundred-jointed (VII. 6. 6) and thousand-pointed (I. 80. 12). Indra has also been mentioned as armed with a bow and arrows (VIII. 45. 4; X. 103. 2, 3; etc.) and as carrying a hook (VIII. 17. 10). In the *Atharvaveda* (VIII. 8. 5-8), Indra is said to have a net.

Indra's golden car (VI. 29. 2) is drawn by tawny steeds (I. 174. 6; I. 177. 1; IV. 32. 22-24; etc.). The steeds vary in number from two to one hundred (II. 18. 4-6) and a thousand (II. 13. 9). They are white-backed (VIII. 1. 25) and sun-eyed (I. 16. 1, 2). The steeds are the givers of rain (I. 177. 2; VI. 44. 20). The steeds, as they travel, split up the directions into two (III. 43. 6). Indra's chariot and steeds were fashioned by the *Ṛbhus* (I. 111. 1; V. 31. 4).

Indra is said to be related to several deities. His mother is *Aditi* (IV. 18. 8), also the cow (*gr̥ṣṭi*) (IV. 18. 10; X. 101. 2). He is also called the son of one with a band round the neck (*nīṣṭigri*) (X. 101. 12). Indra's father seems to be *Tvastr* (I. 32. 2; II. 17. 6; etc.), *Agni* is his twin-brother (VI. 59. 2). He is the seventh brother of the *Ādityas* (X. 99. 2). *Pūṣan* is also his brother (VI. 55. 5). Indra's wife is mentioned in several places (I. 82. 5-6; V. 37. 3; X. 86. 11, 12; etc.).

Indra is helped by the *Maruts* in his works (I. 52. 4; I. 100. 1-15). In fact, he is called the master of the *Maruts* (III. 40. 3). He was also helped in his works by the *Ṛbhus*, with whom he rides in the same chariot (III. 60. 4). The

Aśvins also helped Indra in his works (I. 116. 21 ; X. 131. 4) ; once, they saved Indra (X. 131. 5).

We are told something about the birth and origin of Indra. Two hymns (III. 48 ; IV. 18) are concerned in describing his birth. He is often described as having been born. He is said to have wished to be born in an unnatural way through the side of his mother (IV. 18. 1, 2). He illuminates the sky after being born (III. 44. 4). He sets the wheel of the sun in motion after his birth (I. 130. 9). He was a warrior from his very birth (III. 51. 8 ; V. 30. 5 ; VIII. 45. 4 ; etc.). The mountains (sky ?), heaven, and earth trembled with fear when he was born (I. 61. 14). Indra, again, is said to have sprung from the mouth of *Puruṣa* (the Divine Being) (X. 90. 13). He is said to have arisen from Prajāpati (Śatapatha Brāhmaṇa and Taittiriya Brāhmaṇa).

Indra's abode is high up (II. 30. 5) in the heaven (II. 31. 3). Indra and Varuṇa travel over the dusty region (*rajas*—sky ?). He is lord of heaven (III. 30. 21). Indra, immediately after birth, is placed in the highest region (*parama vyoma*) (III. 32. 10). Again he has been invoked, with the Maruts, to come from heaven, sky, earth, water, the place of the sun (*ādityaloka*) and the distant place.

I shall now deal with the characteristic deeds of Indra. (1) Indra is connected in various ways with the heaven, sky, and earth. He is said to support them (III. 32. 8 ; III. 49. 4 ; IV. 16. 3 ; etc.), to have placed the luminaries in the heaven (I. 81. 5), to have built the universe (II. 12. 4), and to protect the flowers and annuals in the fields (II. 13. 7). Most of these works, however, cannot be properly said to be characteristic of Indra, as many other deities have also been endowed with these functions. (2) The main characteristic work of Indra is exhibited in connection with darkness, cloud, thunder, and rain. Indra is said to have covered (every thing) with widespread darkness (II. 17. 4). On the other hand, he is said to have removed darkness (VI. 17. 5), to have come out of darkness, and to have become bright (III. 39. 5). He is said to have relieved many dawns, autumns, and years of darkness (IV. 19. 8). Evidently, all these passages refer to widespread cloud-formation causing darkness. We have also direct mention of clouds. Thus, immediately after the birth of Indra, large clouds were held together and these poured down water on the ground (IV. 17. 2). Indra travels over the clouds (I. 155. 1), which he makes to grow (V. 32. 2). He cleaves the clouds (III. 30. 21 ; III. 45. 2 ; etc.), held fast by Vṛtra (II. 17. 1). He made water flow from the clouds (I. 33. 10 ; III. 57. 2 ; X. 99. 3 ; etc.). He released the choked clouds in the rainy season (V. 32. 2). In numerous passages, Indra has been regarded as the rain-pourer (I. 10. 10 ; II. 11. 9 ; IV. 30. 18 ; etc.). He gives rise to incessant rain with the help of Brhaspati

(II. 23. 18) and Pūṣan (VI. 57. 4). He has been invoked many times to give rain (I. 74. 9 ; etc.). He is said to fill up the rivers with water and to form rivers (IV. 19. 7 ; VI. 44. 21 ; etc.). He filled up the seas with water (I. 174. 9) and made it rise up (II. 15. 6). There are many evidences of his connection with thunder and storm. Thus, the heaven and earth, seas and mountains tremble with fear when Indra is born (I. 16. 14). He destroyed the villages by his thunderbolt, cleft the seven palaces of Autumn (I. 174. 2 ; VI. 20. 10) and broke the mountain peaks (V. 19. 5). All these phenomena are distinctly referred to in the killing of various demons (Dāśas) by Indra (see below). (3) Indra is again intimately connected with the sun. He has been identified with the sun (II. 30. 1 ; IV. 16. 1 ; VIII. 82. 4 ; X. 89. 2). His car has been called sun-eyed. Again, the sun is said to have originated from Indra (III. 30. 12) ; Indra fashioned the sun (II. 7. 12 ; III. 31. 15 ; III. 32. 8). He produced the brightness of the sun (II. 13. 7) and fashioned his path (X. 111. 3). Indra, with Soma (VI. 72. 2), raised the sun high up (in the sky). Indra holds the sun (I. 52. 6). He has placed him (in the sky) (VI. 17. 5) and makes him ascend in the sky (I. 7. 3 ; I. 51. 4). He makes the sun visible to us every day (VI. 30. 2). He is invoked (IV. 41. 6) so that one may see the sun for a long time. Indra is said to have produced the day (III. 34. 4) and make it visible (VI. 47. 21).

Indra has also arranged for the path of the moon in the sky (X. 138. 6).

Indra is also connected with dawn. He is said to have produced dawn (III. 31. 5 ; III. 32. 8) and established dawn (VI. 17. 5). Again, he is said to have destroyed her (IV. 30. 8-10), to have broken her chariot into pieces (II. 15. 6) and got her kidnapped by the sun (II. 20. 5).

Lastly, let us study some of the past deeds of Indra. (1) Of all the past deeds of Indra, the story of conflict between the sun and Etaśa and Indra's intervention in this matter is of great value to us. The true significance of this myth has already been dealt with in another place (*Indian Historical Quarterly*, Vol. V, 1929, p. 136). The story is told in a fragmentary form in a few passages (I. 61. 15 ; II. 19. 5 ; IV. 30. 6 ; V. 29. 5, 10 ; V. 31. 11 ; VIII. 1, 11). In brief, it runs thus : There was a conflict between the sun and Etaśa. Indra intervened in the conflict. In some passages Indra is said to have obstructed the sun and have allowed Etaśa to go ahead ; in others, Indra got hold of Etaśa and made the sun advance. (2) The story of Dadhīci is depicted in six passages (I. 84. 13, 14 ; I. 116. 12 ; I. 117. 22 ; I. 119. 9 ; X. 48. 2). Adhering to what is found actually in the R̥gveda, we may narrate the story as follows : Dadhīci had the head of a horse, which the Áśvins bestowed upon him. Dadhīci received the honey from

Tvaṣṭr and gave it to Aśvins. The honey became a sort of binder round their (Aśvins') waist (*apikakṣya*). Indra, in search of Dadhīci's horse-head hidden in the mountains (clouds), got it in the region of darkness (*śaryanāvati*). He drove the cows (light ?) towards Dadhīci and killed the Vṛtras ninety-nine times with Dadhīci's bone (that is, thunderbolt made from Dadhīci's bone). (3) Indra killed the son of Tvaṣṭr (*viśvarūpa*) (III. 48. 4) (see above). (4) Indra brought out Agrū's son, surrounded by white ants, from the anthill. Agrū's son, thus taken out, although blind came to see Ahi. All the separated joints came together.

Although Indra has been mentioned many times in most of the Brāhmaṇas, there is nothing to be found there for our purpose. In Taitti. Br. (1, 5. 1, 5) the asterism *Śatabhiṣak* is assigned to Indra; but in ancient astronomical works the asterism is meant for Varuṇa. In Śatapatha Brāhmaṇa (5. 3. 3. 6), Indra is called Jyeṣṭha (the eldest). In Pitāmaha-siddhānta Indra is also called Jyeṣṭhā and in the Vedāṅga-jyotiṣa (Yaj. 33; Arc. 26) he is the presiding deity of the asterism Jyeṣṭhā. Indrāgni together is the presiding lord of Viśākhā (Yaj. 33; Arc. 26).

I shall now discuss on the physical nature of Indra. He is taken as the 'thunder-god, gigantic in size, a mighty eater and drinker, who slays the dragon with his lightning bolt' (see Macdonell's *Vedic Mythology*, p. 66). There is not the least doubt that Indra is a thunder-god and giver of rain. But we can proceed further. He is intimately connected with the sun, the sun's path and dawn. These facts lead us to the conclusion that he is connected with the ecliptic. Again, the passages in which he is stated to have produced the brightness of the sun, to have made the sun ascend in the sky, to have produced dawn and again to have destroyed her through the sun, all make us believe that he is connected with that part of the ecliptic which corresponds to the summer solstice. In northern India, the summer solstice is connected with rain and thunderstorm (summer monsoon); in the summer solstice the days are longest with a prolonged dawn, curtailing the night, and an early rise of the sun. All the facts concerning Indra and his connection with the sun and dawn can be well-explained if we accept him as 'the god of the summer solstice'. We have a further confirmation of this in the allegorical story of the conflict between the Sun and Etaśa. We take Etaśa as the *mean sun*. Their conflict means the point where they meet, that is, where the equation of time becomes zero. There are two components of the equation of time, one of which is the obliquity of the ecliptic and the other is the eccentricity of the orbit of the earth. The equation of time, due to the first cause, makes the true sun and mean sun (Etaśa) meet in the two equinoctial and solstitial points. But the combined effect is to place the meeting point on one side of these four

points. When this meeting point was placed before the summer solstice, the true sun was slower than the mean sun at the time of that solstice. When this meeting point was behind the summer solstice, the true sun was faster than the mean sun at that time. This meeting point is not fixed, but is moving very slowly year after year. The idea that Indra is the god of summer solstice has already been set forth by Plunket in his *Ancient Calendars and Constellations*, p. 115.

I shall now attempt to interpret some of the facts concerning Indra. Indra's connection with Varuṇa may be easily explained if we remember that the rains continue till the autumnal equinox (which is presided over by Varuṇa). Indra's origin from the mouth of *Puruṣa* (= *samvatsara*, Gopatha Brāhmaṇa, pūrva 5. 3, 5 and Śatapatha Brāhmaṇa, 12. 2. 4. 1) simply indicates that the beginning of the year was counted from the summer solstice. The story of Dadhīci, again, seems to be allegorical. Dadhīci is the horse-head constellation figure in the asterism Aśvinī. The Aśvins are the two stars of the same asterism, with their triangular chariot, the *bharani nakṣatra* (*Indian Historical Quarterly*, Vol. VI, 1930, p. 172). Tvaṣṭṛ is the presiding deity of the asterism Citrā (Vedāṅga-jyotiṣa). Honey which formed the girdle round the waist of the Aśvins may be that part of the milky way extending from Citrā to Aśvinī. When the summer solstice was near the asterism Citrā, this asterism used to appear in eastern horizon at or before dawn and the Aśvinī with the horse-head constellation-figure lay on the western horizon, the latter covered with clouds and darkness. The clouds used to be dispersed with rain and thunder and at the same time the daylight used to make its appearance.

4. Viṣṇu.

Viṣṇu has been invoked thrice alone and twice with Indra: in one hymn (I. 22) he has been praised alone in several passages and with Indra in others. Altogether he is eulogised or otherwise mentioned for about one hundred times.

Viṣṇu is friendly with the Aśvins (I. 156. 5) and with Indra (I. 22. 19). He remains associated with Indra (I. 156. 5). He and Indra are regarded as the masters of Soma (VI. 69. 3). The Maruts protect the sacrifice for Viṣṇu (I. 85. 7).

Viṣṇu is brilliant, seven-rayed (I. 155. 1), hundred-rayed (VII. 100. 3). He travels above the clouds with Indra (I. 155. 1).

The essential feature of Viṣṇu is his three strides (I. 154. 2, 3; I. 22. 17, 18), which are meant for Indra (VIII. 52. 3) and by which he travels round the worlds (I. 155. 4; VI. 49. 13). He goes to his very distant abode by these three steps (I. 154. 3). His highest step (I. 22. 20, 21) has a well, full of honey (I. 154. 5). Two of his steps are visible to men, but the

third one is beyond the flight of birds or beyond the idea of mortals (I. 155. 5; VII. 99. 2). Viṣṇu is further called wide-going (*urugāya*) and wide-striding (*urukrama*).

Viṣṇu is said to support the earth by his rays (VII. 99. 3). He supports the east side of the earth (VII. 99. 3). Like several other deities, Viṣṇu is regarded as supporting the worlds (I. 154. 4; VII. 99. 2).

The principal deeds of Viṣṇu are closely similar to (or identical with) those of Indra. Associated with Indra, he killed Vṛtra (VI. 20. 2) and destroyed the tricks of Vṛṣaśipra (VII. 99. 4). He also killed Varci and destroyed the strongholds of Sambara (VII. 99. 5). Again, Viṣṇu made the circle of 90×4 revolve like a wheel (I. 155. 6).

Viṣṇu is of much less importance in the Vedas, but he comes into great prominence in the Brāhmanas and in the Purāṇas. I shall here confine my attention to the Rigveda only.

It is unanimously held that Viṣṇu represents the sun. His essential characteristic, namely, his three steps, has been differently interpreted. The three steps have been regarded as his going to the heaven, sky, and earth by Śakapūṇī (Nirukta 12, 19). The commentator, Durgācārya, considers the three steps as the rise, ascent to the midsky and setting of the sun. We take the three steps as the shifting of the sun from the equinoxes to the solstice and from the solstice to solstice. Beginning from the equinoctial point in the mid-heaven, the first step is the sun's northward passage to summer solstice, the second step is his passage from the summer solstice to the winter solstice at the opposite side, and the third step is his passage from the winter solstice back to the equinoctial point. The positions of the two solstices are clear and distinct at the two ends, but the common place of the two equinoctial points is not visible; this has already been referred to (see above). Further, Viṣṇu's setting the circle of 360 in motion (see above) evidently refers to the annual motion of the sun and not his daily passage through the sky. Lastly, his association with Indra and his works common to those of the latter as the god of summer solstice, is quite clear.

IV. SEASONS.

1. *Rbhus*.

The *Rbhus* have been invoked in some seven hymns and celebrated or simply mentioned by name in a large number of scattered verses.

They have been addressed as the sons of *Sudhanvan* (good archer) (I. 110. 2; III. 60. 1; IV. 35. 1; etc.), sons of *Indra* (III. 37. 4) and grandsons of *Śarasa* (might) (III. 35. 1; III. 37. 4). They have also been referred to as children of *Manu* (III. 60. 3) and as *Ādityas* (VIII. 9. 12).

The *Rbhus* are bright (I. 161. 11; IV. 36. 5) like the sun (I. 110. 4); they are deft-handed (X. 66. 10), skilful (IV. 33. 1, 8), all-spreading (IV. 34. 9), leaders (of the world) (IV. 34. 9), and holders of the heaven (X. 66. 10).

Regarding their ornaments and equipments, we hear of their metal helmets and fair necklaces (IV. 37. 4) and of their bright car and fat steeds (I. 161. 7; IV. 37. 4; VII. 48. 1).

The *Rbhus* are three in number: *Rbhu*, *Vibhu* (or *Vibhvā*), and *Vāja* (I. 161. 6; IV. 33. 3). Fire has been invoked as *Rbhu* on several occasions (II. 1. 10; etc.).

The *Rbhus* have been endowed with many powers. For convenience the works of the *Rbhus* may be grouped under two headings: their usual work and past deeds. Their usual work is to make the charioteer skilful (IX. 22. 6), to lower the felly of the wheel of the chariot (VIII. 75. 5), and spread the firmament in a moment (IV. 33. 1). They also produce grass in the elevated regions and water in the low lands (I. 161. 11). They bring down *Indra*'s thunderbolt from heaven.

We are informed of many wonderful past deeds of the *Rbhus*: (i) They rejuvenated the old and worn-out parents (I. 20. 8; I. 110. 8; IV. 33. 2, 4; etc.). (ii) They fashioned a car for the *Āsvins* (I. 20. 3; IV. 33. 8; X. 105. 6; etc.). This three-wheeled car traverses the sky without horse and reins (IV. 36. 1); it moves in a circle without turning (IV. 36. 2); and when this car rises in the heaven, the maiden of the sky (*Kanyā*) makes her appearance (X. 39. 12). (iii) They made a cow (I. 161. 3; IV. 34. 9), which is omniform (*viśvarūpā*) (I. 161. 6) and yields nectar (I. 20. 3; III. 60. 2; etc.). The cow was formed out of hide (I. 110. 8) or drawn out from the hide (I. 161. 7; etc.). They again created the mother (cow) from the young (calf). They fashioned the cow for *Brhaspati* who drove up the omniform (*viśvarūpa*), while *Indra* yoked the two steeds and the *Āsvins* yoked the car (I. 161. 6). They also

protected the cow up to (the end of) the (whole) year and formed her limbs out of the flesh throughout the whole year and protected her beauty up to the end of the year (IV. 33. 4). (iv) They divided the cup devised by *Tvaṣṭr* (I. 20. 5) who is also mentioned as an *Asura* (I. 111. 3, 5; I. 161. 8; III. 60. 2; IV. 35. 2, 3; etc.). The eldest said that he should divide the cup into two, the second said that he should divide it into three, and the youngest that he should divide it into four (IV. 33. 5). When *Tvaṣṭr* said that those who have defied the drinking cup of the gods should be killed, the *Ṛbhus* took another name from that time and the maiden (*Kanyā*) pleases them by calling them by that name (I. 161. 5). When *Ṛbhus* had broken the cup into four pieces, *Tvaṣṭr* concealed himself amongst the women (I. 161. 4). In other places we are told that *Tvaṣṭr* expressed his desire (that the cup should be so broken) (IV. 33. 6) and praised them (IV. 33. 5). The *Ṛbhus* again made the cup (I. 161. 9). The cup is brilliant like the day (IV. 33. 6). (v) They made a steed out of another (I. 161. 7), prepared a shoulder-guard, separated the earth from the heaven, and produced a beautiful son (IV. 34. 9).

Owing to their wonderful deeds they gained immortality although they were mortal beings (I. 110. 4; III. 603; IV. 36. 4). They also obtained the friendship of various gods—*Ṛbhu* of *Indra*, *Vibhu* of *Varuṇa*, and *Vāja* of the gods (IV. 33. 9).

We are told that one holds water to be the best, another fire, and the last one growth (vigour) (I. 161. 9).

There is a passage (I. 164. 44) which runs thus: Three, provided with hair, look at the whole year in sequence of the *ṛtus* (seasons); of them, one strews (scatters), one sees the universe with his activity (work); of one there is motion, though no appearance (definite work) is seen. Sāyana takes them to be the fire, sun, and wind. They may equally well be taken as the three *Ṛbhus*, whose functions are to give rise to rain, to produce growth of vegetation and nothing in succession.

Lastly, there is a story concerning the *Ṛbhus*. They came to the house of the sun (named as *agohya* in some places) (I. 110. 2) and lay in his house. When they slept (in the house of the *agohya*), they asked the sun 'who awakens us here?' The sun answered 'the awakening dog; (it is a) complete year; reveal yourselves' (I. 161. 11). In another hymn (IV. 33. 7) we are told that when the *Ṛbhus* remain in the house of the sun for twelve days, they make the fields full of harvest and the rivers full of water.

I shall now discuss the physical basis of the *Ṛbhus*.

The word *Ṛbhu* means 'dexterous, skilful'; the word *Vibhu* 'the eminent' and the word *Vāja* 'the vigorous.'

Following Sāyana (in his commentary on I. 110. 6), some

of the oriental scholars, as Wilson, etc., hold that the *Rbhus* are sun's rays. Max Müller states that the names are meant for the sun or Indra in many places. Weber takes them to mean the genii of creative time, past, present, and future. Others, as Ludwig, Zimmer, Kaegi, Hillebrandt, and Hardy rightly hold them as the genii of three seasons (See Macdonell's *Vedic Mythology*, p. 133). I shall discuss this view fully below.

That the *Rbhus* are the three seasons or rather their presiding deities can be well maintained from the following evidences : (i) Many acts attributed to the *Rbhus*, as, for instance, the production of grass on the elevated regions and collection of water in low lands, bringing down of Indra's thunderbolt, preparing harvest-field and filling of rivers with water, are really works of nature intimately connected with seasonal variations. (ii) The *Rbhus* are three in number. Let us see with what seasons they are connected. Although the Indian year is at the present day divided into six seasons, we have reason to believe that the division was very variable in the Vedic and Brahmanic times. We find the lowest number of two, summer and winter, in the Smrtis (Śabda-kalpadruma, article 'ṛtu'), but we have no evidence in the Rigveda. Such a division is quite feasible in the north-west portion of India (Panjab and Sind) where there are two extremely hot and cold seasons with or without scanty rains. Next comes the division into three : winter, summer, and rainy season (according to the Smrtis). In Rigveda there are two passages (I. 164. 2, 48) in which a year has been said to consist of three *nābhīs* (navels). There is mention of three seasons in Śatapatha Brāhmaṇa (III. 4. 4. 17; XI. 5. 4. 21) and Kauṣitaki Brāhmaṇa (XI. 7), where each of them is taken to consist of 120 days. Sāyana enumerates them as *grīṣma* (summer), *varsā* (rainy season), and *hemanta*. In smrtis they are *śita* (winter), *grīṣma*, and *varṣā*. The *hemanta* has been said to be last in Śatapatha Brāhmaṇa (I. 5. 3. 13), or middle in Taittirīya Brāhmaṇa (III. 11. 10. 4). Such a division is confirmed when we consider the climatic condition of the Indo-gangetic plain that has a summer monsoon attended with more or less heavy rain and a more equable temperature all the year round. The *hemanta* evidently means the winter. Next we have mention of five seasons in Tāndya Brāhmaṇa (XII. 4. 8; XII. 2. 3), Śatapatha Brāhmaṇa (II. 2. 3. 14; II. 5. 2. 16; III. 1. 4. 20; III. 1. 4. 5), and Aitareya Brāhmaṇa (I. 1). In the last work it is distinctly mentioned that *hemanta* and *śisira* (winter) have been taken to represent one. In Rigveda we have mention of five divisions of the cycle of the year (I. 164. 13) and five felines of the wheel of the sun (I. 164. 14). The division into five is rather secondary to the division into six. The division into six seasons has been mentioned many times in the Brāhmaṇas and has also been indicated in the Rigveda

(I. 164. 13). Lastly, there is a counting of seven seasons in the Brāhmanas (Śatapatha, VI. 6. 1. 14; IX. 3. 1. 19; etc.; Taittirīya III. 8. 3. 3 *in a year of 13 months*). This is also seen in Rigveda (I. 164. 3, 15): there are three which are paired, and a single one (unpaired). This counting however takes into consideration an intercalary month. The names of all the seasons are found in the Rigveda. Of them, the term *gharma* (which meant heat in the Vedic times) occurs about 24 times and has been used to mean the heat of the fire and the sun (distinctly pointing to the summer heat in many places). The term *grīṣma* occurs once (X. 90. 6) only. The term *prāvarīṣ* (rainy season) occurs twice (X. 103. 3, 7). The term *varsā* does not occur in the Rigveda. The word *śarad* (autumn) occurs about 30 times throughout the work (in all the maṇḍalas) and has been used in the sense of a year, indicating a year-end. The term *hemanta* occurs once in X. 161. 4, where it points to an end of the year. The term *hima* (winter) occurs ten times in the first, second, fifth, sixth, and eighth maṇḍalas and in some passages (I. 64. 14; II. 33. 2; V. 54. 15); it indicates year-ending. There is no mention of the term *śiśira* which is used for the winter season in later periods (See Amarakoṣa). Lastly the term *vasanta* (spring) occurs twice (X. 90. 6; X. 161. 4) and in one passage it is made to indicate the year-ending. We find that the terms *gharma*, *śarad*, and *hima* occur many times in earlier hymns as shown by the name of their composers and by their grammatical peculiarities (see Arnold's *Historical Vedic Grammar*) and the others in the later ones. Hence we may take these three as the names of seasons into which a year used to be divided in the early Vedic period. Hence we may take the summer, autumn, and winter as the three recognised seasons of the early Vedic period. We are told that *Rbhu* obtained friendship with Indra, *Vibhu* with Varuṇa, and *Vāja* with the gods. From this we may infer that *Rbhu* is connected with the summer, *Vibhu* with the autumn, and *Vāja* with the winter. The same idea seems to be also suggested when we are informed that one of them likes fire, another water, and the third one growth or vigour. Considering the derivative meanings and the various deeds of the *Rbhus* I think that the summer includes the rainy season, the autumn includes the *hemanta* as well, and the *hima* (winter) includes the spring.

I shall now show to what extent the various functions assigned to the *Rbhus* can be reconciled or appropriately interpreted in the light of the above views. The derivative meanings of the names of the *Rbhus* are more or less obscure. The dexterity on the part of *Rbhu* may have some bearing on the works of heat in nature. The eminence of *Vibhu* in connection with rains may be related to the harvest supplying provision (hence the superiority over others). The vigour of *vāja* indicates the bodily vigour and strength which occurs in winter.

Sudhanvā, the father of the Rbhus, is probably the sign Sagittarius and probably the year-beginning and hence the beginning of the seasons used to be counted from the sign.

The usual works of the Rbhus more or less refer to the conditions of the sky and the surface of the earth at the time of the heavy rains with attendant thunderstorms.

The past deeds of the Rbhus can also be well interpreted. The parents are none but the heaven and the earth (dyāvā-prthivī) and their rejuvenation means the revival of the luxuriant growth of vegetation on the surface of the earth and the reappearance of the clear blue sky. The Ásvins' triangular car is the triangle formed by the principal stars of the zodiacal constellation *bharanī*. Its fashioning perhaps indicates its appearance above the horizon in the clear cloudless sky after the rains. The 'maiden of the sky' is more appropriately the sign Virgo than the 'morning', as interpreted by Sāyana. Being the fourth sign from Aries (*Mesa*), both this and Virgo can be seen at the same time above the horizon. As the Ásvins are intimately connected with ūṣā in many hymns of the Rīgveda, Sāyana was led to this conclusion. The appearance of the rains and thunderstorms is indicated by their fashioning of Indra's steed and the bringing down of his bolt. The cow seems to be the cloud and the nectar the rains. In some places the surface of the earth might have been intended by the cow (IV 33. 4). Tvaṣṭi's cup, as already interpreted by the oriental scholars, is the moon's disk. This is distinctly indicated when we are told that the cup is brilliant like the day. The division of the cup into two, three, and four pieces may be taken to indicate that the seasons were made to commence with half-moon (first or last quarter) one-third-moon and one-fourth-moon (last two corresponding to crescents, that is, its different phases); and their refashioning of the cup means the formation of the full-moon. The origin of one steed from another and the birth of a beautiful (strong) child evidently refer to the breeding and gestation occurring in some particular season. The separation of the earth from the sky probably indicates the clearing of the sky and hence its clear distinction from the earth after the rains. The making of a shoulder-guard is perhaps the production of bodily vigour (strong arms and shoulders) under the influence of a bracing climate.

The story of the Rbhus sleeping in the abode of the sun and their awakening by the dog as the year was at an end leads us to the following astronomical interpretation: (i) The abode of the sun is a part of his apparent circular path through the heaven, that is, the ecliptic. (ii) The sleeping of the Rbhus for 12 days in the abode of the sun means that the progress of the season becomes very much slowed or comes nearly to a stand-still. This also indicates the slowing of the sun's journey through the heaven or, what is the same thing, the slowing

down of the speed of the revolution of the earth round the sun. This slowing takes place to the greatest extent in a certain point of the earth's elliptical orbit round the sun known as the aphelion. Seen from the earth the sun is seen to occupy just the opposite point, the perihelion, where the motion of the sun is seen to be greatly slowed down. The slowing of the progress of the season has nothing to do with the winter solstice as held by the oriental scholars. This misapprehension arose from the fact that the perihelion is at present at a distance of few degrees from the winter solstice. (iii) The dog awakening the Rbhus is the brilliant star, Sirius, so well-known to the ancients. (iv) The season was *sarad* at that time, which represented the end of the year. We may now infer that the period in which the actual observation was made was characterized by the coincidence or closeness of the sun's position in the perihelion with the autumn and the heliacal setting of the Sirius. There is reason to believe that the beginning of a year in ancient times was generally counted from an equinox or a solstice; hence we may suppose that the perihelionic position of the sun and the autumnal equinox were more or less coincident at that time. Both the perihelion and the equinoctial points are movable; they revolve in opposite directions. We can find out the approximate time of their coincidence from the following calculation:

The distance of the perihelion from the vernal equinox in Jan. 0, 1900, according to Newcomb is

$$281^{\circ} 13' 15'' + 61.89^{\circ} \cdot 03 T + 1^{\circ} \cdot 63 T^2 + 0^{\circ} \cdot 012 T^3$$

where $T = \text{a century}$.

The position from the autumnal equinox is then

$$281^{\circ} 13' 15'' + 61.89^{\circ} \cdot 03 T + 1^{\circ} \cdot 63 T^2 + 0^{\circ} \cdot 012 T^3 - 180^{\circ} \\ = 101^{\circ} 13' 15'' + 61.89^{\circ} \cdot 03 T + \text{etc.}$$

Taking the motion of the perihelion $16^{\circ} \cdot 89$ for a year and calculating backwards the number of years for the arc of $101^{\circ} 13' 15''$, we find that the perihelion and autumnal equinox coincided some 5887 years ago, that is, in 3987 B.C.

The position of the vernal equinox at the above epoch, taking the approximate annual motion of the equinoxes to be $50^{\circ} \cdot 25$, was

$$5887 \times 50^{\circ} \cdot 25, \text{ or } 82^{\circ} 101' 2''$$

behind the present position. As the present position of the vernal equinox is placed in the sign *Piscis* at a distance of $18^{\circ} 44'$ from the beginning of the sign *Aries*, its position at the above period was

$82^{\circ} 10' 21'' - 18^{\circ} 44' \cdot 6$ or $63^{\circ} 26' 21''$ behind the beginning of the sign *Aries*. This corresponds to the beginning of the sign *Gemini*. The star *Sirius*, placed at about 82° from the beginning of the sign *Aries*, used to appear in the sky in the evening

at about the end of the year. The autumnal equinox was placed in the beginning of the sign Sagittarius and used to indicate the end and beginning of the year.

2. *Rtu*.

One complete hymn (I. 15) is dedicated to *rtu*, where most of the eminent deities have been asked to drink Soma with her (*Rtu*) in addition. Mentioned in more than thirty passages she is Soma's mother (II. 13. 1). The sun is a division of *rtu* (II. 38. 4). Agni (V. 12. 3; X. 2. 1.), Indra (III. 47. 3; X. 99. 10), *Ṛbhus* (IV. 34. 7), and the sun (III. 20. 4) are called the originators or masters of *rtu* (*rtupā*). The sun and moon have arranged for her (X. 85. 18). Day after day and *rtu* after *rtu* are passing (X. 18. 5). In one passage (VII. 103. 9) it is said that the frogs do not envy the twelve *ritus*; when the rainy season comes after the year is over, the frogs, having suffered from the summer heat, come out of their holes (VII. 103. 9).

There are other passages where *rtu* is used for 'time'. This use is confined to the hymns of the tenth maṇḍala. But, considering the above passages, one is justified in thinking that the word was originally used to mean 'month'. Only in later times the sense was changed for time in general. It does not seem to have been used for 'season' in any place.

We have *numerous* references to *ritus* as seasons (five or six number) in the Brāhmanical literature.

V. PLANETS.

1. *Planets in general.*

There are several passages in the Rigveda which seem to refer to planets.

In VIII. 14. 9, the stars (*tāṛakā*) are said to have been fixed and made immovable by Indra. On the contrary, there is mention of moving luminous bodies in the firmament (heaven). In I. 37. 9, we are told that the firmament is fixed; the *birds* can fly through it. Again, Varuṇa is said to know the track of birds flying in the firmament and of the boats flying in the ocean (vast sky) (I. 25. 7). Puṣan's golden boats ply in the heaven (VI. 58. 3). In all these passages, the birds and boats may be taken for planets. There are two other terms, *ukṣā* and *adhvaryu*, which may refer to planets again. *Ukṣā* means one which sprinkles or emits (spark or light). *Adhvaryu* means one who lights the sacrificial fire—secondarily, one who lights fire in the heaven, which glitters in the heaven. In III. 7. 7, we are informed that the seven Brāhmanas are guarding their favourite place with five Adhvaryus; and that the immortal Ukṣās of the sky are regularly moving towards the east. Again, in I. 105. 10, we are told that the five Ukṣās which move in the sky have their motion stopped now. In the first of these two last passages, I take the seven Brāhmanas as the constellation Great Bear (*Saptarṣi*). The five Adhvaryus may be the five planets (see Hillebrandt: *Vedische Mythologic*, pp. 3, 423). In the second passage, we have reference to the stationary position or retrograde motion of the planets. Lastly, the earth has been qualified as Ukṣā (IV. 56. 1, 2). Hence she might have been taken as one of the planets.

The two deities Brhaspati and Vena, considered below, perhaps represent Jupiter and Venus.

2. *Brhaspati.*

Brhaspati is invoked in some eleven hymns and in part of another hymn. In two hymns he is praised with Indra. Altogether, he is mentioned or eulogised some hundred and seventy times or more. He seems to be closely connected with Agni (I. 38. 13; III. 26. 2; etc.).

Brhaspati is the same deity as Brahmanaspati, as he is addressed in II. 23, by both the names.

Brhaspati is seven-mouthed (IV. 50. 4), seven-headed (X. 67. 1), and seven-rayed (IV. 50. 4). He is hundred-winged (VII. 97. 7). All these epithets seem to refer to his brilliancy.

He is distinctly called bright (I. 190. 1; III. 62. 7), bright like a meteor (X. 68. 4) and ruddy and golden-coloured (V. 43. 12). His close relationship with Fire may have something to do with these characters. He has a beautiful tongue (I. 190. 1; IV. 50. 1). He is clear-voiced (VII. 97. 5). He is great (I. 190. 8) and mighty (I. 190. 3, 8). He is blue-backed (V. 43. 12).

Of the implements, Brhaspati has a bolt (I. 40. 8; II. 30. 9), a bow with arrows (II. 24. 8), and a golden axe which Tvaṣṭr sharpens (X. 53. 9). His car is bright, cleaves the clouds (*gotrabhid*), and knows the heaven (II. 23. 3). His steeds are ruddy (VII. 97. 6).

Brhaspati's abode is beautiful (VII. 97. 7) and is situated in a luminous region (VI. 73. 1) at a very high distant place (V. 50. 3). Again he is said to have three abodes (IV. 50. 1).

Brhaspati is the father of the gods (luminaries) (II. 27. 3; IV. 50. 6). He is the eldest (*jyeṣṭha*). Rodaśi (Heaven-earth) is his mother (VII. 97. 8). He was given birth to by Tvaṣṭr (II. 23. 17). He was born first (VI. 73. 1) and was born by divine law (X. 67. 1). Again, he is said to have been born first in the high space of the luminous region (IV. 50. 4).

The deeds of Brhaspati are closely similar to those of Indra. He destroys darkness (II. 23. 3; X. 68. 5), cleaves the clouds (II. 24. 4; VI. 73. 1), causes rainfall (I. 190. 1, 8; VI. 73. 1; etc.), and loosens the fixed ones and uproots them (II. 24. 3). He rent Vala (IV. 50. 5; II. 24. 3), and killed the Sambaras (II. 24. 2), Vṛtras (VI. 73. 2) and helped Indra in killing the followers of Kṛiṣṇa (VIII. 96. 15). He opened up the rocky door with the help of the noisy geese (probably the Maruts) (X. 67. 3). He opened the door for the downpour of rain in the autumnal months (II. 24. 5). He released the cows (light) from inside the mountains (darkness) (II. 23. 18; IV. 50. 5; X. 67. 4; X. 68. 2; etc.). When the multiform water (*viśva-rūpaṃ vājam*) became agitated, Brhaspati ascended to the upper part of the heaven; the various luminaries praised him (X. 67. 10). Like many other deities, Brhaspati is regarded as having made the ends of the earth steady (IV. 40. 1). He is also called the lord of a flock (gods?) (II. 23. 1). Several minor deeds are also assigned to him (I. 18. 2; etc.).

Brhaspati is regarded as the presiding deity of the asterism Tīṣya (Pūṣyā) (Taitt. Sam. 4. 4, 10. 1; Taitt. Br. I. 5. 1, 2; 3. 1. 1, 5; Vedāṅga-jyotiṣa).

Macdonell (*Vedic Mythology*, pp. 103-4) has discussed the views of all the oriental scholars. Macdonell remarks that he was a representative of Agni at first, later became the deity of Tīṣya and in post-Vedic times as the planet Jupiter.

I can find no reason why we should not regard him as the planet Jupiter even in the Vedic times. The characteristics of Brhaspati lead us to this conclusion. He stands next to

Venus in brilliancy. His characteristic deeds evidently refer to his rising in the sky during the summer monsoon.

3. *Veṇa*.

This deity is invoked in a single hymn (X. 123. 1), although the name occurs several other times in the R̥gveda. In the singular, it has been used to qualify the sun (I. 83. 5), Indra (I. 61. 14), and Br̥haspati (I. 139. 10), signifying brilliancy or beauty. It has also been used in the same sense in the plural in several other passages (I. 56. 2; IX. 64. 11; IX. 73. 2; etc.).

Veṇa is a messenger of *Varuṇa* (X. 123. 6). He has a bright appearance and his back (or surface) is seen (I. 123. 2). He is also called bright-wombed (X. 123. 1). He has bright wings (X. 123. 6, 7). He holds a spotted weapon and has a shining armour (X. 127. 7).

Veṇa remains brilliant on the top of the sky (X. 123. 2) where he travels (X. 123. 3). He is reddish in colour (IX. 21. 5). He is said to be one remaining in the womb of the spotted (heaven) (X. 123. 1). He arises in the sky and wanders in a high place (X. 123. 7). He is a swift mover (X. 123. 8). He is called a celestial musician (X. 123. 4, 5), and is said to roar like a buffalo (X. 123. 4). *Veṇa* is also connected with lightening (*apsarā*) as his lover (X. 123. 5). He is again called a pourer (of rain ?) (X. 123. 8).

Veṇa is connected with the moon in two passages. The moon is said to order *Veṇa* (IX. 21. 5). *Veṇa* remains in the heaven of the moon above the sky (VIII. 63. 1).

There is a passage (IV. 58. 4) in which we are told that *Indra* brought out the luminous bodies that were concealed in three places in the clouds (*goṣu*). Again, we are told (X. 123. 8) that, when *Veṇa* makes his appearance by his brightness in the firmament, the sun illuminates the third world (third part of the sky) with his white light.

Taking into account his brightness, place in the heaven, and connection with the moon, I regard *Veṇa* as the planet Venus. The close similarity in name and identical significance in their derivation (see *Century Dictionary*, word 'Venus') are confirmatory evidences of this view.

VI. STARS, ASTERISMS, AND CONSTELLATIONS.

A. Deities connected with Stars.

1. *Aja Ekapāt*. The name of the deity occurs six times (II. 31. 5; VI. 50. 15; VII. 35. 13; X. 64. 4; X. 66. 11). He has been invoked five times with Ahirbudhna, thrice with the sea, twice with the earth, and once with several other deities, as the sun, fire, *Prśni*, *Brhaspati*, river, sky, roaring cloud, *Sindhu*, *Rhbus*, *Apa*, and *Sarasvati*. In one passage (X. 65. 13) he has been called a roarer and one provided with the thunderbolt (*pāviraḥ*).

The name also occurs in the White and Black Yajurvedas. In *Vājasaneyi Samhitā* (5. 35) *Aja Ekapāt* and Ahirbudhna have been designated as *gārhapatya* Fire, but in *Taittiriya Samhitā* (1. 3. 3) *Aja Ekapāt* has been so called and Ahirbudhna as *dakṣiṇa* (southern) Fire.

In *Atharvaveda* (XIX. 11. 3) we are told that *Rohita* (the sun) gave origin to the heaven and earth and that *Aja Ekapāt* was placed there.

The name of the deity also occurs in the *Brāhmanas*. In *Taittiriya Brāhmaṇa* (3. 1, 2, 8) the sun has been called *Aja Ekapāt* and in two other places of the same work (1. 5. 1, 5; 3. 1, 2, 9) we are told that *Proṣṭhapada* is placed on the east of *Aja Ekapāt* and Ahirbudhna on the north of *Proṣṭhapada*. In *Śatapatha Brāhmaṇa* (8. 2, 4. 1) we are told that the goat climbed up after having become one-footed.

In *Mahābhārata* (I. 121) *Aja Ekapāt*, Ahirbudhna, and *Mṛgavyādhā* have been counted amongst the eleven Rudras.

Yāska in his *Nirukta* (12, 30) says that *Aja Ekapāt* is one who walks with one leg or one who protects or drinks with one leg. The author of *Nighanṭu* (5, 6) regards him as a deity.

In *Yājuṣa-jyotiṣa* (Sl. 10) and *Āra-jyotiṣa* (Sl. 9) we get the names in place of the asterisms *Pūrva-proṣṭhapada* and *Uttara-bhādrapada*. Again *Aja Ekapāt* has been regarded as the lord of *Pūrva-bhādrapada* (same as *Pūrva-proṣṭhapada*) and Ahirbudhna as that of *Uttara-bhādrapada*. In *Pitāmaha-siddhānta* (an old astronomical work) we find the names of *Aja* and Ahirbudhna after *Dhanistha* in the list of asterisms with a north latitude (that is, placed north of the ecliptic). In *Vṛddhavaśiṣṭha-siddhānta* (Ch. 8, Sl. 8) we are told that the two *Ajapadas* are placed on the north, evidently referring to *Aja Ekapāt* and Ahirbudhna. In another place (Ch. 8, Sl. 20) we find that Ahirbudhna does not disappear under the sun's rays (that is, it is placed higher up from the path of the sun). In *Soma-siddhānta* (4, 6, 32) and *Sūrya-siddhānta* (8, 16) we

find the two Bhādrapadas mentioned in place of Aja Ekapāt and Ahirbudhna.

Roth and Boehtlingk (in their Wörterbuch) thinks Aja Ekapāt as the one-footed lord of the storm. Bloomfield, Victor Henry, and Wallis (in his Cosmology of the Rigveda, p. 54) take him as the sun. The view must have been derived from the Taittiriya Samhitā. Hardy calls him the moon. Bergaigne thinks him some isolated, hidden or unintelligible dweller on land. Macdonell regards him as the personification of lightening (*Vedic Mythology*, pp. 73, 74).

Considering what we find in the above-mentioned works, I am unable to accept any of the above views and from the evidences we have in the Brāhmanas and the astronomical works I am led to the view that the two deities in question represent two stars.

We see that, at the time when the Yājuṣa-jyotiṣa and Āraajyotiṣa were composed (or compiled), Pūrva-bhādrapada and Uttara-bhādrapada were respectively known as Aja Ekapāt and Ahirbudhna.

In Taittiriya Samhitā (4, 10, 13) and Maitrāyaṇi Samhitā (2, 15, 20) two asterisms named Proṣṭhapadā are mentioned in their list; in Kāthaka Samhitā (39. 13) the two asterisms are named Proṣṭhapadā and Uttara-proṣṭhapadā. Again in Taittiriya Brāhmaṇa we find mention that Proṣṭhapada is placed on the east of Aja Ekapāt and Ahirbudhna on the north of Proṣṭhapada. The two Proṣṭhapadas, according to the later astronomical works, are the Pūrva- and Uttara-bhādrapadas. Each of the two asterisms consists of two principal stars, one of which forms the junction-star. The junction-star of the Pūrva-bhādrapada is α Pegasi; it is placed on the south; the other star is β Pegasi, placed on the north. The two stars of the Uttara-bhādrapada are α Andromedae (on the north) and γ Pegasi (on the south). The Pūrva-bhādrapada, again, is placed on the east of Uttara-bhādrapada. If the four stars of the two asterisms are joined together we get a four-sided figure. Following the view of Taittiriya Brahmana, we consider Aja Ekapāt as α Pegasi. The Proṣṭhapada of the same work, viz. γ Pegasi, is placed on the east of α Pegasi. α Andromedae, placed on the north of α Pegasi, is Ahirbudhna.

I shall now try to explain the meaning of the name of Aja Ekapāt. We know that the sign Aquarius is partly formed by three-fourths of Pūrva-bhādrapada and the sign Pisces is formed by one-fourth of Pūrva-bhādrapada and the whole of Uttara-bhādrapada. The sign Capricornus (*Makara*) is placed before Aquarius. Although the Hindu figure of the sign Capricornus is represented by a fish-like animal with a long proboscis, the figure according to ancient Babylonian, Greek, and Arabian astronomy consisted of the front half of a goat with two front legs above and the hinderhalf of a fish below (as the name suggests).

It is highly probable that the two legs of the goat were made to extend in such a way that the stars α Pegasi and α Andromedae were placed, one on each leg. We can thereby understand why the two stars were called Ajapadas in the Vrddhavasīṣṭha-siddhānta. The change of the name to Proṣṭhapada (which means the leg of an ox or of cattle in general) makes us believe that the original figure of the goat was later changed to an ox or to cattle in general.

Lastly, we come to the interpretation of the attributes of Aja Ekapāt. His attributes as a roarer and the holder of the thunderbolt and his praise with the river, sea, and dusty earth lead to the idea that he was closely connected with storms and rains. In the ancient western astronomy we find that the sign Aquarius represents the sun as giver of rains and producer of storms. Thus we can easily understand why the deity is connected with storms and rains. We further know that in northern India the summer solstice is connected with storms and rains. In such a case we may think that the hymn was composed from observations taken at the time when the summer solstice was passing through the sign Aquarius which used to rise in the heaven at night with the stars α Pegasi and α Andromedae appearing at the eastern horizon. This happened sometime between 2000–2500 B.C.

In this connection we may mention that the phrases *devodhārtā sindhū* and *samudriya Āpaḥ* in X. 65. 13, seem to refer to celestial and not to earthly objects. The first phrase signifying 'Sindhu (river) supporting the heaven' probably means the long branching milky way. The other phrase meaning 'Āpaḥ belonging to the sea' indicates a star of the same name (see Āpaḥ).

2. *Apām Napāt*. The deity has been invoked in one complete hymn (II. 35) and in one verse (V. 41. 10). The name also occurs in four other places (I. 143. 1; III. 5. 3; VIII. 44. 16; V. 8. 5) where the term has been used to qualify Fire. This use, as we shall see below, has some important significance regarding the physical nature of the deity Apām Napāt.

We are informed of certain characteristics of the deity. He has been called a roarer (II. 35. 1). He is brilliant (II. 35. 3, 4, 7, 9, 11, 13), gold-like, and of a golden colour (II. 35. 10). His rays are beautiful (II. 35. 11). He is also called *āśuhemā*, that is, spreading (brilliant) like gold. He is placed above the firmament (II. 35. 9) and his abode is in the high region (II. 35. 14). He sits on the place made of gold (II. 35. 8). He feeds on nectar (II. 35. 5). It has been said that the Horse and Apām Napāt were born high up (in the heaven). Apām Napāt is found to be connected with water in various ways: He is full of water (II. 35. 8). He is the womb of the showerer (V. 41. 30). He, being filled with water, becomes pregnant in water and (again) tastes or drinks the same water as a child

(II. 35. 13). He is surrounded by water (II. 35. 3, 4, 7-9). The waters meet (with one another); others come to meet with them; and they equally satisfy the watery place formed into river (II. 35. 3). The waters, having a tendency to run together, make Apām Napāt brilliant in the firmament (II. 35. 3). The waters are golden in colour and their course is crooked (II. 35. 9). Three goddesses hold the food of Apām Napāt; they are as though made of water and they move in water (II. 35. 5). The cow of Apām Napāt is a milk-giver and bestower of rain (II. 35. 7). The other worlds are the branches of Apām Napāt (II. 35. 8). The herbs grow for him.

We do not find the name of Apām Napāt in the Brāhmaṇas. In Nighantu (5. 4) he is regarded as the grandson of Apaḥ. He is considered as the god of the middle region.

In the ancient astronomical works of the Hindus (Vṛddha-vaśiṣṭha-siddhānta 8. 12; Brahma-siddhānta 2. 177; Soma-siddhānta 4. 6. 12; Sūrya-siddhānta 8. 21), we get mention of a star, named *Apām Vatsa* (θ Virginis); this is placed in the sign Virgo. The sign Virgo is characterised by numerous nebulae, many of which can be seen with the naked eye. The modern constellation figure of the sign is that of a virgin holding a bunch of wheat in the left hand. 'In Egypt, Virgo was associated with Isis and it was reported that she formed the Milky Way by throwing millions of wheat-heads in the heaven.' Sometimes she is shown with wings (*Enc. Brit.*, 14th edit., the figure in the article 'constellation'). Again other women used to be also represented with the virgin in the same sign. α and γ Virginis used to represent two goddesses. The virgin was often represented with her daughter (see Whyte's *Constellations and their History*, 1928, pp. 123-7).

In Avesta, we find something about Apām Napāt. He is the god of water and lives in the depth of water. He remains surrounded by women and is invoked with them. He rides on a fast-going horse and holds the light inside the ocean.

I shall now discuss the opinions of the oriental scholars. Spiegel, depending on the versions of the Avesta, thinks him to be some deity connected with Fire. Darmesteter takes him to be the Fire of the lightening produced in clouds. Schroeder is of the same opinion. Oldenberg thinks him to be a deity of water and says that it is by a mistake that he has been taken as Fire arising in water. Hillebrandt and Hardy identify him with the moon. Max Müller thinks him to be the sun or lightening. Macdonell considers him as the Fire in the form of the lightening of the cloud (see Macdonell's *Vedic Mythology*, p. 70). Lastly, Plunket (*Ancient Calendars and Constellations*, p. 129) considers him as 'the fire of water' that is, the fire of the sun passing over the sign Aquarius. He also thinks that at about 3000 B.C. the winter solstice was placed in the sign Aquarius.

We cannot accept any of the above views. Comparing the attributes of Apām Napāt and the physical surroundings of Apām Vatsa we consider them identical. All the attributes assigned to Apām Napāt are easily explained if we take this view. The 'golden place' simply refers to the nebulae in the surroundings. The 'waters' again refer to the same. The 'rivers' represent the Milky Way with its branches. The three goddesses were nothing but three brilliant stars in the surroundings (see above). The 'cow' is nothing but the cloud. The downpour of rain and the growing of herbs evidently refer to the period when the star used to rise on the heaven towards the end of the rainy season at night and hence the vernal equinox must have been placed near the Pleiades (Kṛttikā) at the time of the observation. This happened sometime between 1750-2000 B.C.

Lastly, since we find the deity mentioned in the Avesta, with more or less the same attributes, I believe that the star was recognised at a very early period of Aryan civilization.

3. *Ahīrbudhna*. This deity has been praised in some twelve places, five times with Aja Ekapād and thrice with Apām Napāt.

We do not get any idea of the deity from the Vedas. He has been said to be 'born from water' and to live amongst waters in the firmament (VII. 34. 16). He has been invoked not to cause any harm to the people (V. 41. 16 ; VII. 34. 17) ; thus he must have been considered as a malefic deity.

According to Yākṣa (4. 30), Ahīrbudhna is one whose abode is in the firmament (antariksa). According to Sāyaṇa, the term signifies 'one going to the firmament.'

Oriental scholars think this deity to be 'a serpent of the Deep'. Macdonell thinks that Vṛtra and Ahīrbudhna were probably the one and the same god but that later they have become differentiated from each other.

We have shown under Aja Ekapād that Ahīrbudhna is the star α Andromedae.

4. *Āpaḥ*. The present deity has been invoked seven times.

She is brilliant (VII. 47. 3 ; VII. 49. 2-4) and producer (oozer) of honey (VII. 49. 3). She was born in the firmament (VII. 49. 2). We find the mention of her 'waves' (VII. 47. 2) which arose in the heaven (X. 30. 9). Indra drinks the (water from the) wave (X. 30. 9). She goes through water (VII. 49. 1) and has got medicine (from herbs) and fire in her body (X. 9. 6). Fire has entered the body of Āpa (VII. 49. 4). Varuṇa is her husband (VII. 49. 3). Indra released her once (VII. 49. 1). Varuṇa and Soma live in her abode (VII. 49. 4).

The name of Āpa occurs some forty-seven times in Vājasaneyisaṃhitā in connection with the *mantras* of various sacrifices. In many hymns she has been invoked for various kinds of benefit or gift. In the Atharvaveda, we find the

word more than one hundred and twenty times. The goddess has been invoked several times. The word has also been used for water and for the milky way (heavenly waters) as well. No new characteristics of the deity are, however, available in either of these Vedas.

The term is also found in the Brahmanas. Āpaḥ has been called the life (prāṇa) (Taitt. Br. 3. 2. 5. 2; Tāṇḍya Br. 9. 9. 4; Śat. Br. 3. 8. 2. 4; Jaim. Br., Uttar. 3. 10. 9), the nectar (Śat. Br. 1. 9. 3. 7; 3. 9. 4. 16; 4. 4. 3. 15; Kaus. Br. 12. 1; Ait. Br. 8. 20), the well (Śat. Br. 6. 7. 4. 4; also in Yajurveda 12. 19), the pacification (Śat. Br. 1. 2. 2. 11; etc. Ait. Br. 7. 5. Tāṇḍya Br. 8. 7-8; Kaus. Br. 3. 6-9. Gop.-Br. 1. 25), the medicine (Kaus. Br. 3. 6-9; Gop.-Br. 1. 25), the sap of annual herbs (Śat. Br. 3. 6. 1. 7; 3. 3. 3. 18; 3. 9. 4. 7), reverence (Taitt. Br. 3. 2. 4. 1), vigorous (Śat. Br. 1. 1. 1. 1; 3. 1. 2. 10; 5. 3. 4. 13), pure (Śat. Br. 1. 1. 1. 1; etc.), milky juice (Tāṇḍya Br. 1. 3. 4. 8), the vaiśya (Kaus. Br. 12. 1), the food (*anna*) Śat. Br. 2. 1. 1. 3; etc.; Taitt. Br. 3. 8. 2. 1; 3. 8. 17. 5; Kaus. Br. 12. 3. 8; Ait. Br. 6. 30; Jaim. Br. Uttar. 1. 25. 9; 1. 29. 5), destroyer of evil (Taitt. Br. 3. 2. 3. 12; 3. 2. 4. 2), the bolt (Śat. Br. 5. 3. 4. 1), the sun (*arka*) (Śat. Br. 10. 6. 5. 2), the *Yajña* (Kaus. Br. 12. 1; Śat. Br. 1. 1. 1. 12, etc.; Taitt. Br. 3. 2. 4. 1; Ait. Br. 2. 20) and the *retah* (seminal fluid) (Ait. Br. 1. 3; Śat. Br. 3. 8. 4. 11; etc.). She has been called the wife of Varuṇa (Taitt. Br. 1. 1. 3. 8) and of Agni (Śat. Br. 6. 8. 2. 3). Again Āpaḥ is the favourite abode of the gods (*devas*) (Taitt. Br. 3. 2. 4. 2).

In Yājuṣajyotiṣa (Sl. 18, 33) and Āraṇyajyotiṣa (Sl. 14, 26), the Pūrvāsādhā nakṣatra is called 'Āpa' and again she has been termed the lord of Āpaḥ. In Pitāmahasiddhānta, the word 'āpa' has been used for the same asterism. In Somasiddhānta (4. 6. 4) the position of Āpa has been given with regard to *Abhijit*. In the same work (4. 6. 12) as well as in Brahmasiddhānta (2. 178) and Sūryasiddhānta (8. 21), Āpa is stated to be placed on the north of Apām Vatsa.

Āpaḥ has been mentioned in the Avesta as 'Āpo'. Oriental scholars regard the present deity as the moon (see Macdonell's *Vedic Mythology*).

Following the astronomical works above referred to, we are inclined to take her to represent δ Sagittarius, the junction-star of Pūrvāsādhānakṣatra. The star is placed in the Milky Way.

Now let us see how far we can interpret her characteristics if we accept this view. Her brilliancy is well-explained by taking her to be a brilliant star. The honey she oozes out is nothing but the star-cloud of the Milky Way surrounding her. The waves again refer to the branches of the Milky Way. The idea that the moon lives in her abode is explained by the fact that she is a junction-star. Again the idea that Varuṇa is her husband and lives in her abode is well-reconciled if we assume that the autumnal equinox (which represents Varuṇa

was close to the star at the period of observation. Further, the idea that Indra released her once is very nicely explained if we take Indra to represent the summer solstice. In such a case, the release by Indra simply means that the part of the ecliptic presided over by Indra had once passed through the star but was now replaced by another represented by Varuna. Her connection with medicinal herbs is understood since there was autumn at the time, the period of growing of the herbs. The numerous indefinite attributes of the deity recorded in the Brāhmanas are also explained if we adopt the present view.

5. *Tvaṣṭṛ*. This deity has been mentioned in some thirty-seven hymns.

Tvaṣṭṛ has been called *Viśvarūpa* (omniform or having the beauty of the world) (III. 55. 19). He has also been addressed by another name *Neṣṭṛ* (I. 15. 3), a name given to one of the main priests in a Soma-sacrifice.

Tvaṣṭṛ has a wife (X. 66. 3) and is the father-in-law of *Vāyu* (VIII. 26. 21, 22). Again he is the father of *Viśvarūpa*, the guardian of cows.

We hear of *Tvaṣṭṛ*'s dexterous hands (III. 34. 20). He holds an iron axe in his hand (VIII. 29. 3) and has a chariot and steeds (VI. 47. 19).

Tvaṣṭṛ is a skilful workman (I. 85. 9; III. 54. 12); he fashioned (I. 32. 2; I. 85. 9; V. 31. 4; VI. 17. 10; etc.) and sharpened (I. 52. 7) Indra's thunderbolt. He also sharpens the iron axe of *Brahmanaspati* who makes the cup by its aid (X. 53. 9).

We are informed of some of his deeds. Thus he makes the people long-lived by remaining in company with them (X. 18. 6). He develops the germ in the womb and shapes the human and animal forms (I. 188. 9; VIII. 91. 8; X. 184. 1). He has been invoked to bestow vigorous sperm (to male) for the generation of strong offsprings (III. 4. 9; III. 55. 19) and to give brave sons (VII. 34. 20). *Tvaṣṭṛ* fashioned a new cup (I. 205) which contained the food for the *Asuras* (I. 110. 3) or the beverages of the gods (I. 161. 5; III. 35. 5). He begot *Brhaspati* (II. 23. 17). *Tvaṣṭṛ*, along with the Heaven and Earth, the Waters and the *Bhṛgu*s, generated *Agni*.

Tvaṣṭṛ remains in company with the gods' wives (II. 31. 4; II. 36. 3); when he found his cup divided into four pieces (by the *Rbhus*), he concealed himself among the women (I. 161. 4). He appears in many places of the world (VI. 47. 19).

Indra drank the Soma juice in *Tvaṣṭṛ*'s cup by force (III. 48. 4) and by defeating him (IV. 18. 3). *Tvaṣṭṛ* trembles for fear of Indra's wrath. He was crushed by Indra who seized him by the foot (IV. 18. 12).

We are also told that the light (darkness-destroying energy) of *Tvaṣṭṛ* was caught (was concealed) in the moon's disk (II. 84. 15).

A story is told of the marriage of *Saranyu*, the daughter of *Tvaṣṭr* (X. 17. 1, 2). The whole world came to the occasion of the marriage of *Saranyu*. When she (the mother of Yama) was married to the sun, she disappeared. When the immortal (lady) was concealed from the mortals, a woman of her form (*Savarnā*) was given to the sun and the Aśvins were born to them. *Saranyu* left the twins.

In later Sanskrit works *Tvaṣṭr* has been identified with the sun. In *Kāṣika Sūtra* he is identified with the sun and *Prajāpati* as well. In *Mahabharat* he has been recognised as a form of the sun. In *Mārkaṇḍeya Purāṇa* he has been identified with *Viśvakarman* and *Prajāpati*.

In *Āraṇyaka* (sl. 9) and *Yāyusaṃjyotiṣa* (sl. 10) he has been identified with *Citrā* (the star Spica) in one place and as its presiding deity in another (A.j. sl. 26; y.j. 33).

I shall now discuss the physical basis of the deity.

The name of the deity, derived from the root *tvaks* seems to mean "the fashioner" or "artificer" (see Macdonell's *Vedic Mythology*, p. 117).

Although *Tvaṣṭr* has itself been recognised as a deity in the *Rigveda*, still the name has been used in several places to qualify the fire and the sun.

Tvaṣṭr has been regarded as an obscure deity by the Vedic scholars. Different scholars hold different views on the nature of the deity: thus, Kühn, Hillebrandt, and Hardy regard him as the solar deity and they are justified by the fact that the name has been used to qualify the sun in several places. Ludwig considers him as a god of the year. Oldenburg regards him as a "pure abstraction expressing a definite characteristic activity" (*Vedic Mythology*, p. 117).

Considering *Tvaṣṭr* as a definite deity, as he is invoked in the *Rigveda* (apart from the term being used for the fire or the sun), we find that no definite idea can be had of his physical nature from the *Rigveda* alone. We may, however, form a definite idea of the deity from the fact that he has been identified with the brilliant star Spica (in the constellation of Virgo—*Kanyā*) in the *Vedāṅgaṃjyotiṣa*. We shall now see how far we can appropriately interpret the various attributes of *Tvaṣṭr* if we identify him with the star Spica.

The Spica has been called the little lancet-bearer (Smyth's *Cycle of Celestial Objects*, Second Edition, 1881, p. 376); *Tvaṣṭr* holds an axe in his hand. The sign Virgo has been credited with the power of producing fruits and animals (*Ibid.*, p. 377). The star Spica has been called the ear of corn, grain, and seed in ancient times (*Primitive Constellations* by R. Brown, Vol. I, p. 65). *Tvaṣṭr* has also been credited with creative powers. *Tvaṣṭr*'s cup is the moon's disk. The defeat of *Tvaṣṭr* by Indra can be well reconciled if we think of a period when the summer solstice (which is associated with rains and thunderstorms in

India—attributed to *Indra*) was passing through the constellation. *Tvastr*'s generation of the fire can be understood when we find that the constellation Virgo is remarkable for the large number of nebulae surrounding the Spica. In fact the constellation has been called "the field of the nebulae" (Rev. Charles Whyte's *Constellations and their History*, 1928, p. 127). The epithet that *Tvastr* is the "guardian of cows" may have something to do with the clouds or with the brightness of the star itself which has its figure in the form of a lamp or pearl. The nebulae might have been referred to as the gods' wives. The waters evidently refer to the celestial waters—the milky way. The important evidence we possess is the statement that *Tvastr*'s light has been obscured by the moon's disk. The Spica is a junction star (that is, it comes in conjunction with the moon). In consideration of these facts we may take *Tvastr* as the personification of the star Spica.

Lastly, as regards the story of *Saranyu*'s marriage with the sun, we can identify *Saranyu* with *usā*, the morning. *Savarnā* with the daylight after the sunrise. The birth of the *Āsvins* simply means their appearance in the morning when the story was composed from actual observation.

B. Heavenly Dogs.

Dogs are mentioned in nearly all the Vedas. Although the earthly animals are distinctly meant in some passages, celestial objects seem to be indicated in others.

(1) *Saramā*. The name occurs in six passages and in one complete hymn (as a dialogue between her and the Panis) in the R̥gveda. She has been described as one with strong legs (III. 31. 6). From the dialogue between *Saramā* and Panis (X. 108) we find that she was deputed by *Indra* as a messenger in search of cows kept hidden by the Panis under the mountains (X. 108. 7). She told them that *Vṛhaspati*, Soma, the stones for grinding the Soma plant, the sages, and the learned people had all come to know of the cows concealed by them and threatened them that they would be killed if they did not run away from the place (X. 108. 11). She had to cross a river (*Rasā*) to go to the Panis (X. 108. 2). Then *Indra* broke asunder the mountains and she discovered the cows (IV. 16. 8), where they were confined (I. 72. 8), by their lowing (III. 31. 6). After the cows had been discovered, *Vṛhaspati* killed the Panis and rescued the cows (I. 62. 3). *Saramā* (evidently for the services she rendered) got plenty of food and other articles from *Indra* (III. 31. 6) and the *Angirasas* for her son (I. 62. 3). Lastly, we are informed of the ceremonies performed by the *Angirasas* which proved successful and *Saramā* came to the place of sacrifice and saw the cows (V. 45. 7); we are also told that, on the advent of dawn, *Angirasas* met with the cows and there

was a proper pouring of milk over the place of sacrifice and Saramā was able to see the cows on the right path (V. 45. 8).

We do not find any reference in the other Vedic works.

In Nirukta (2, 24), Saramā is regarded as a 'bitch of the gods'.

Saramā is regarded by Max Müller (*Science of Languages*, 1882, Vol. II, pp. 513-6) as 'dawn' and the whole myth as a figurative description of a natural phenomenon of the morning. The cows, i.e. the suns rays or reddened clouds were concealed by the Panis, i.e. darkness. At dawn, Indra, i.e. the day-light appeared, fought with darkness, and released the cows. I am unable to accept this view, as it does not take into account such points as the giving of milk by the cows, and Saramā as the bitch of the gods. Further Indra cannot be taken to represent light. A better and more feasible explanation will be offered below.

We shall see that Saramā is the star Procyon of Canis minor. The name *saramā* is derived from *sarāṇa* (Nirukta 2, 24) meaning 'one moving swiftly'. We have also mention of her strong legs. She has been called 'a bitch of the gods' and is comparable to the dog accompanying a hunter, a practice which holds good not only at the present time, but for bygone days as well. We know that the common and domestic animals had their place in heaven as constellation figures in ancient times. There is a passage in Taittiriya Brāhmaṇa (I. 5. 4) where it is said that Prajāpati created all animals and each of them occupied a star. Hence Saramā may be taken as a star (or a constellation) having the form of a dog or bitch. There is mention of three offsprings of Saramā (Sārameyas) or Dogs which will be discussed below.

Saramā is the mother of the Dogs and we have Procyon as the fore-dog. Saramā had to cross a river to go to the Panis. Procyon 'was supposed to have crossed the "Great Stream" as the Egyptians called the Milky Way, which now lies between him and his brother Canis Major, and hence he appears as "before" the Sirius-dog'. The Euphratian name of Procyon was *Kakkab Pallika* or *Palura* ('the crossing-of-the-water-Dog'). Again 'a circular "object of ivory" figured by Schliemann (Ilios, p. 601) shows a scorpion (probably with a part of the Milky Way¹) in the centre, a Dog (male) on one side and a Dog (female) on the other'. (Brown's *Primitive Constellations*, Vol. I, p. 279.) Taking these facts into consideration, we may take Saramā to represent Procyon, the female dog. Rasā is the Milky Way. Further, we find in Mahābhārata that Saramā followed *Skanda* (the constellation figure of Orion) in his march. Procyon lies a little way off to the east of Orion and beyond the Milky Way (*Popular Hindu Astronomy*, by

¹ This is our insertion.

Kālinath Mukherji, p. 51). This also leads us to the same idea.

The myth in my opinion seems to be nothing but a vivid representation of the natural phenomenon of the summer monsoon, the rainfall of the hot season attended with thunder-storm. Cows are clouds and their milk is rainwater. Panis were the demons of drought and Indra the god who caused the downpour. Vṛhaspati seems to be the planet Jupiter.

Lastly, we cannot accept the idea of Max Müller that Vedic Saramā is a remnant of Helena; we rather think her to correspond with Hermes, the messenger of the god Zeus.

(2) *Śvan* (*Sārameya*). In the Rigveda, the animal is mentioned in connection with the Rbhus (I. 161. 13). It is said to awaken the Rbhus when they sleep in the abode of the sun at the end of a year. In another place (VII. 55. 2), the dog is addressed as a bright son of Saramā (*Sārameya*) who shows his tooth, which gleams like a lance's point within his mouth when he would bite. Lastly, we are told (X. 86. 4) that, while Indra protects the favourite Vṛṣakapi, the Dog, a pursuer of the boar (*varāha*), has bitten his ear.

In the Atharvaveda there are three passages which definitely refer to a celestial Dog (VI. 80. 1-3). They run thus: (i) He flees in the firmament observing all things. We adore the greatness of the Heavenly Dog with this offering. (ii) The three Kālakanjas are set aloft in heaven as they were Gods. I call all these to be our help and keep this man secure from harm. (iii) Your birth is in water, your station is in heaven, your majesty is on earth and in the ocean. We will adore the greatness of the Heavenly Dog with this offering.

It is quite clear from the above passages that the Dog is a heavenly luminous body; further, her birth in water indicates that he is placed in the Milky Way. We have numerous references to a Dog-star Sirius in the astronomy of the West (Whyte's *Constellations and their History*, p. 232; Brown's *Primitive Constellation*, Vol. I, pp. 98, 99, etc.). Sirius lies in the mouth of the constellation *Canis Major*. I identify *Śvan* with *Canis Major*. One of the passages from the Rigveda above referred to (VII. 55. 2) agrees remarkably with one which we quote below from Aratos's *Phænomenon* (pp. 582-5) on *Canis Major* and its tooth-star Sirius. The passage runs thus:

....His portentious jaw

Bears at the end a star which scorches most,

Resplendent; so men it the Scorcher call.

Comparing the two passages we may say that *Śvan* represents the constellation *Canis Major* and its *tooth* the star Sirius. As the terms 'constellation' and 'star' were very loosely used in ancient times and were interchangeable it is quite possible that *Svan* might have represented the Dog-star Sirius as well (see Brown's *Primitive Constellations*, Vol. I,

pp. 278, 285). The boar, pursued by the dog, may be a constellation figure coinciding with the constellation *Lepus* chased by the Dog-star (Brown's *Primitive Constellations*, Vol. I, p. 97). *Vṛṣākapi* seems to be the constellation *Orion* (see p. 100).

We find mention of *Mṛgavyādhā* in connection with a myth described in *Aitareya Brāhmaṇa* (3, 33). The story, told briefly, is that *Prajāpati*, lustful of his own daughter, followed her. She assumed the shape of a doe and *Prajāpati* transformed himself into a buck. He approached her. The gods, in order to prevent the evil consequences of this act, created a god, *Bhuta vat* from their own bodies. *Bhuta vān* pierced *Prajāpati* with an arrow and, having done so, went up (that is, became a heavenly body). He was now named *Mṛgavyādhā*; or the hunter of the deer. The female deer became the nakṣatra *Rohiṇī*. The arrow became three-knotted. It thus appears that *Mṛgavyādhā* is a celestial body. It is mentioned as a star in *Soma-siddhānta*, *Brahma-siddhānta*, and *Sūrya-siddhānta* and its position, there given, makes it identical with the star *Sirius*. It is also known as *Lubdhaka*. Thus, whereas *Śvan* represents the constellation *Canis Major*, its tooth-star became later on known as *Mṛgavyadhā* or *Lubdhaka*, and is the Dog-star *Sirius*. The three knots of the arrow seem to be the three stars on the belt of *Orion*.

(3) *Yama's Dogs*. In the *Rigveda* there are two passages where we have mention of *Yama's* two dogs (X. 14. 10, 11). In the first passage, the dead is directed to go to the place of the two dogs; that are four-eyed and variegated in colour. In the second passage, the four-eyed dogs are mentioned as two messengers of *Yama*, guarding the path to his abode. In the *Atharvaveda* the same two passages are repeated (18. 2, 11, 12). There is a third passage (8. 1. 9) where *Yama's* dogs are called road-defenders.

Considering the physical nature of *Yama* (to be discussed) his Dogs must also be some celestial bodies. The two Heavenly Dogs known to the ancients have been identified with *Saramā* and *Śvan*, so that this pair must be some other body represented in heaven. As *Yama's* dogs remain as a pair and guard the path of the dead to *Yama's* abode, and as the dead fathers are the presiding lords of the asterism *Viçṛta*¹ (the two *Vicritas*—stars λ and ν *Scorpiões* lying side by side), also known as *Mūla* in astronomical works, we may take the two dogs of *Yama* as the two above-mentioned stars of the asterism *Mūla*. The name *vicṛta* means one which 'opens' or 'loosens' and thus the *Vicritas* may be openers of the gate of *Yama's* path. Now, why are *Yama's* dogs four-eyed? There was a Semitic myth that the 'solar *Merôdakh* had four

¹ *Taitt. Sam.* 4. 4, 10.

divine dogs'; 'this number is not accidental, but represents the flow of light from the Diurnal-sun to the four quarters' (Brown's *Primitive Constellations*, Vol. I, p. 277). Here, too, the four eyes may refer to four quarters. The name Mūlā of the asterism (signifying one at the base or root) was perhaps given to it from the fact that the autumnal equinox was passing through it at this time and it thus formed the starting point of that half of the sun's path which lay to the south of the celestial equator. As the autumnal equinoctial point represents 'due west', we can easily determine the other directions from it. Thus the four eyes of Yama's dogs were recognised, looking at and pointing out the four directions.

In this connection we may consider why the fathers are made presiding deities of the two asterisms, Maghā and Mūlā (Taitt. Sam. 4. 4. 10). When the vernal equinoctial point was placed near the Pleiades (Krittikas), Mūlā used to rise at sunset and Maghā after midnight during the winter (near about the winter solstice). The period of bitter cold has the highest death-rate particularly among the aged. Further, the vitality of sick and debilitated people become more or less lowered at night, specially after nightfall and after midnight; and thus they become more susceptible to death at these two periods of time. Consequently, the rising of these two asterisms were thought to be inauspicious causing the death of the people. It is for this reason, in my opinion, that the dead fathers were made their presiding gods.

(4) *Kālakanjas*. We have already alluded to the Kālakanjas in a passage of the Atharvaveda (6. 80. 2). Although nothing more is found here, we have a story about them in Taittiriya Brāhmaṇa (1. 1. 2. 4-6). The story runs thus: There were *asuras*, *Kālakanjas*, by name. They built a fire-altar in order to gain the world of heaven. Every man added a brick to it. Indra, in the disguise of a Brahmana, put a brick on for himself saying 'this is *citrā* by name'. They climbed up to heaven. Indra, however, pulled out his brick and they fell down and became spiders. Two of them flew up and became two Heavenly Dogs. The same story is narrated in Śatapatha Brāhmaṇa (2. 1. 2. 13-17) in a slightly different form. The name of the altar is given here as *Rauhiṇa*. There is also an allusion to this story in the Rigveda (II. 12. 1), where Indra, the thunder-holder, is said to have rent the *Rauhiṇa* into pieces, when climbed (by the asuras) to get to heaven. Now, there are two stars, a little way to the north of *Citrā* (Spica) which are named Asterion and Chara, forming a small constellation, Canes Venatici, introduced by Hevelius in the 17th century. There is a star cluster near the southern edge of the constellation. The constellation is illustrated as two greyhounds held by a leash in the hand of Bootes (another neighbouring constellation). (Whyte's *Constellations and their History*, p. 163.) The

two Kālakanjas who flew up and became dogs may be the two hounds representing the two stars of the constellation (K. Mukherji's *Popular Hindu Astronomy*, p. 53). The star cluster may be made to represent the spiders. It is, however, remarkable that the myth of the Ancient East should be explained by a new constellation that was erected as late as the 17th century; this may be a simple coincidence, or Hevelius may have had his materials from the East.

The import of the myth is very obscure. The formation of a fire-altar gradually built up and its sudden breaking down suggest to us the gradual approach of a comet and its disruption. Such an event has been more than once witnessed by modern astronomers. The agency of Indra in its renting into pieces and the formation of one of its bricks by Citrās make me believe that such a disruption, if it actually took place, must have occurred close to Citrā with the summer solstice passing nearabout.

C. Deities connected with Lunar Asterisms.

1. *Aryaman*. The deity has been invoked some seventy-seven times. He is closely associated with Mitra and Varuṇa, as the latter (two) deities have been invoked sixty-six times with Aryaman. Indra has been praised eleven times with him.

In spite of the fact that Aryaman has been praised in so many places, very few of his characteristics have been revealed to us. He has a milk-giving cow (I. 139. 7). He becomes a benefactor with the help of Fire (I. 141. 9) and protects the honest like Fire (I. 186. 2). He takes the side of (that is, supports) Fire's daughter (V. 3. 2). He is one of the sons of Aditi (I. 41. 3-7; V. 67. 1). Aryaman, Mitra, and Varuṇa remain always associated with one another (VIII. 26. 11) and protect (us) together (VIII. 27. 17). Their works are of the same nature (II. 27. 2). They praise the sun in association with Aditi (VII. 38. 4). They have created the autumn (year), month, day, night, sacrifice, and ṛks (VII. 66. 11). Again we find that Aryaman has been praised for providing a new wife, once with Bhaga (X. 85. 23) and once with Bhaga and Savitr (X. 85. 36). Soma has been compared with Aryaman and Mitra and Varuṇa.

The name of Aryaman occurs in Vājasaneyisaṃhitā, the passages being mostly quoted from the Rīgveda. In Taittiriya Saṃhitā we are told that Aryaman, Mitra, and Varuṇa hold the three worlds and the three heavens (2. 1. 11). Again he has been identified with the sun (2, 3, 4). In Atharvaveda, Aryaman has been invoked for benefit in general, to prevent ill-luck, in marriage ceremonies (XIV. 1, 50; XIV. 2, 13), to provide a wife or husband (VI. 60. 1), to remove ill omens on the part of a woman (I. 18. 2) and in the *mantras* for an easy

delivery (I. 11. 1). He has again been called the grandfather of lac (lākṣā) (V. 5. 1).

In Taittiriya Brāhmana (2, 3, 5. 4) Aryaman has been called the sacrificial fire (*Yajña*); again he has been said to be provided with beasts (3. 1. 4. 9). In Śatapatha Brāhmana (5. 5. 1, 12) we are told that the path of Aryaman is placed above the high directions (regions) of Bṛhaspati.

In Āraçjyotiṣa (sl. 14, 25) and Yājuṣajyotiṣa (sl. 18, 32), Aryaman is regarded as the lord of Uttaraphālgunī nakṣatra (the junction-star being β Leonis). In Pitāmaha-siddhānta and Vṛddhavasistha-siddhānta (8, 18) we find the word 'aryaman' in place of Uttaraphālgunī.

Aryaman (as Airyēma) has been praised in the Avesta. Thus, in Vendidad (20, 24) he is said to have produced evil corruptions in the bodies of men; further (20, 26) he is invoked to give joy to men and women of Zarathustra. Again (22, 23) we get the mention of the dwelling of Airyama; he is asked to heal (the sick person) (22, 25); he is also called lustrous (22, 52). We find prayers for him in Yašna (53. 1-3) and Khordah-Avesta (18. 2. 2, 7).

We do not get any definite views from the oriental scholars of the physical nature of the present deity. According to Sāyana (in his commentary on I. 90. 1) he is the sun who is the lord of the division into day and night; again, in another place, he calls him the deity of the junction of the day and night. Considering Mitra and Varuṇa as the day and night, Satyabrata Sāmaśramī (a commentator on the Rigveda) considered the sun before midday as the present deity.

The Uttaraphālgunī nakṣatra forms one-third of the sign Leo and two-thirds of the next sign Virgo. The sign Leo, was named A-rū in the Euphratian list and Aryiah in Hebrew (Brown's *Primitive Constellations*, Vol. I, p. 62). There seems to be every probability of the identity of A-rū and Aryiah on one hand and Ārya on the other. Further the term *aryaman* may be made to mean 'one forming (or having) the lion'. In ancient times the sign held a close relationship with the sun (Whyte's *Constellations and their History*, p. 121). Whyte holds that the place of the sun at the summer solstice was in this constellation at the time the star groups were recognised (p. 120). Again, the sun is the presiding deity of the sign Leo. All these facts help to explain why Aryaman has been made to represent the sun. The Fire with which our deity is connected in some of his attributes probably represents the sun (the celestial fire). The 'daughters of fire' are probably the brilliant stars, as α , γ , δ Leonis, etc. in the neighbourhood. The sign Leo is probably meant by calling him one 'provided with beasts' (or probably the lord of beasts).

We have seen that Aryaman, Mitra, and Varuṇa are praised together in a large number of hymns and that it is distinctly

stated that they are always associated together. We come to know from the ancient astronomical works of the Hindus (Yājuṣajyotiṣa, sl. 10, 33, 34; Āraṇyaka-jyotiṣa, sl. 9, 26, 27; Pītā-maha-siddhānta; Brahma-siddhānta 2. 174; Soma-siddhānta 4. 6, 34; Sūrya-siddhānta 8. 18) that Mitra is the presiding deity of Anurādhā (the junction-star of which is β or δ scorpionis) in the sign Scorpio and Varuṇa the lord of Śatabhiṣā (the junction-star of which is λ Aquarii) in the sign Aquarius. Thus the reason why they are closely associated seems to be due to the fact that the three asterisms could be seen as the same at night. We know that Anurādhā is placed at about a distance of 77° from Uttara-phālgunī and Śatabhiṣā at about a distance of 170° from the latter, and thus they together occupy less than half the circle of ecliptic (360°). Thus arranged, the three asterisms could be seen together above the horizon during some part of night for more than five months continuously.

We also find that the deity is connected with matrimonial ceremonies and that the attributes referred to in the Atharva-veda and Avesta are all related to the spring. Now spring extends for three months from the vernal equinox to summer solstice in the counting of four seasons or two months thereabout (or ending in the summer solstice) in the counting of six seasons. We find, that Spica (Citrā) in the sign Virgo (placed behind Leo) used to be held as the spring star by the Chinese in ancient times (Whyte's *Constellations and their History*, p. 124); and we have already referred to the position of the sun in the summer solstice in ancient times (the summer solstice being placed in the beginning of the sign Leo about 4,500 years ago). We thus see why the deity in his attributes is connected with spring.

Having seen that the summer solstice was placed near the asterism at the time when the observations were made, we can easily explain his 'milk-giving cow' as the 'rain-giving cloud' and his leadership in the giving of water.

Thus we may take Aryaman to represent Uttara-phālgunī or its presiding deity. Perhaps he is also more or less related to the winter solstice.

2. *Dhātṛ*. This deity has been mentioned about nine times in the Rīgveda. In one place (X. 82. 2) Viśvakarman has been called *dhātā*, evidently meaning creator (or supporter) of the universe. We also find him invoked with Indra and Vidhātṛ, but oriental scholars take Dhātṛ and Vidhātṛ to qualify Indra (X. 167. 3). He is said to have created, in proper time, the sun, moon, heaven, sky, and earth (X. 190. 3). Again he has been called the creator (supporter) of the creators (supporters) and the lord of the world and the protector (trātṛ) (X. 128. 7). Then again, he has been invoked to be propitious to the sages (VII. 35. 3), to give protection to the eyes with Savitṛ and the Mountain (X. 158. 3); and to support the gravid

womb of women (X. 184. 1), while Viṣṇu is asked to make the women fit for conception, Prajāpati to make the semen discharge, and Tvaṣṭr to develop the foetus. Lastly, he has been invoked in the marriage ceremony to give affection between the married couple (X. 85. 47).

In White Yajurveda, the deity has been mentioned about five times. Once he has been called liberal (8, 17) and in another place (17, 26) he has been designated as mighty in disposition.

In Black Yajurveda, Dhātṛ has been mentioned for some thirteen times. He has been called a giver (I. 4. 44). He is said to have established the fire and represent the year (I. 5. 1). Dhātṛ with six syllables won the six seasons (I. 7. 11). He is the lord of the offspring and wealth, and is the ruler and creator of the world (3. 3. 1). Again, he is the lord of food and gives food to the baby as it is born (5. 3. 4). We are also informed of his lordly power (3. 3. 10). Lastly, we find him invoked in connection with various sacrifices and he has been bestowed with various offerings.

Dhātṛ has been invoked nearly forty times in the Atharvaveda to grant all sorts of benefits. Thus he has been prayed for general well-being (XIX. 10. 3), for peace and prosperity (XIX. 9, 12), for prosperity with *Uḍumbar* (fig.) amulet (XIX. 31. 3), with Rati and Savitr for power (III. 8. 2), for wealth (VII. 18. 2-4), for long life (XVIII. 4, 8), with Vāyu, Indra, and Savitr for continued life (VIII. 1. 15), and with Vidhatṛ, Savitr, etc. for protecting the sacrifice from *nirrti* (perdition) (V. 3, 9). He has been begged to untie the skin-bag of the water of heaven (VII. 18. 1). He has also been invoked for defence against witchcraft (VIII. 5. 18), against *arbudi* (varicose veins?) (XI. 11, 25) and to heal a wound and reduce a dislocation (IV. 12. 2). Again, he has been prayed to kill the enemy (X. 6, 21) and to protect in war (XIX. 20. 1). We find him invoked for getting a good husband for a woman and a good wife for a man (VI. 60. 3), in marriage ceremonies with other deities (XIV. 1. 33, 34; XVI. 2. 13), for successful conception (V. 25. 4, 5), and for progeny (VII. 20. 1). He has again been invoked in the *mantras* for funeral ceremonies, where he has been asked to protect the dead from perdition from the southern quarters, while Indra and Maruts have been prayed to protect him from the eastern, Aditi with Ādityas from the western, and Soma with all the gods from the northern quarters (XVIII. 3. 25-28); he has also been asked to maintain the dead aloft (XVIII. 3. 29). In addition, we know some of his characteristics from the Atharvaveda. Thus, he has been called the maintainer (XVIII. 3. 29), master, and lord of the moving creation (VII. 18. 1). He sustains the earth, sky, and the sun (VI. 60. 3). Again, in a hymn (IX. 12) where the various parts of the body of an ox and its various postures have been assigned to

various deities, the knee-joint has been attributed to Dhātṛ (IX. 12. 10); it has also been stated that the ox is Agni when sitting, the Asvins when arisen, Indra when standing eastward, Yama when standing southwards, Dhātṛ when standing westward, and Savitr when standing northward (IX. 12. 20, 21). Lastly, we are told that at the beginning of creation Dhātṛ was unborn (XI. 10. 5) and that he was born Dhātṛ (XI. 10. 9).

In the Brāhmanas, several deities have been qualified as *dhātā* (perhaps with reference to the protective or supporting influence): thus Prajāpati (Śat. Br. 9. 5. 1-38), the sun (Āit. Br. 3. 48), the Fire (Taitt. Br. 3. 3. 10. 2), the moon (Ṣaḍv. Br. 4. 6; Gop. Br. 1. 10), and the earth (Taitt. Br. 3. 8. 23. 3), have been so qualified. The year (Taitt. Br. 1. 7. 2. 1) and Death (Taitt. Br. 3. 12. 9. 6) have also been called *dhata*. In some Brahmanas (Tāndya, 24. 12. 4; Taitt. 2. 6. 19. 1-2) Dhātṛ has been regarded as one of the Ādityas.

In the Naighantuka (5. 5), Dhātṛ has been enumerated with the gods of the middle region. In Nirukta (10. 26. 1) he has been described as the generator (or ordainer) of all beings.

The word is also found in the earlier astronomical works of the Hindus. The term is used for the *Uttaraphālguni nakṣatra* in Ārcajyotiṣa (sl. 9) and Yajusajyotiṣa (sl. 10). Somākara, the commentator, takes the word to mean Yama. Again Aryaman has been stated to be the two *Uttaraphālgunis* or their presiding deity in the same two works (Ārcaj. sl. 9, 14, 25; Yāj. 10, 18, 32) as well as in Pitāmaha-siddhānta and Vṛhad-vasiṣṭha-siddhānta (8. 18).

Nothing definite is said regarding the physical nature of the deity by the oriental scholars, except that he is regarded as the creator in general.

From the study of Dhātṛ we find that, whereas he developed into a pre-eminent deity during the Vedic period, he merged into oblivion in the Brahmanic times. Considering the Vedic age, we find in the Rigveda that he has been regarded as a creator of the world and invoked to support the earthly beings mainly in the way of giving them progeny. In the Yajurvedas, his field of gift has been further extended as a sustainer by food and wealth throughout the year. Lastly, in the Atharvaveda, we find him invoked for all sorts of gifts, in fact for all sorts of well-being and prosperity not only for the living but also for the soul of the deceased. Thus he has been regarded as a supporter and sustainer of the world and earthly beings. In the Brāhmanas, he has almost lost his significance as a distinct personage. All the various deities have been qualified as *dhata* (or supporters of the world).

From the above considerations I am led to the belief that, originally considered as a creator and then as a supporter of the world as well, he was later on forgotten as such; and, as we shall see, Prajapati came into pre-eminence in his place.

I shall now try to explain why he was identified with the nakṣatra *Uttaraphālgunī* (in the singular) and why Aryaman later on replaced him and became the presiding deity of the same nakṣatra now mentioned as *Uttaraphālgunau* (in the dual).

Taking at least some of the characteristics of the deity that we find in the Vedas, we may perhaps consider the period of his benevolent works as related to the end of the spring (or beginning of the summer) and at the time of summer solstice, during which period the brilliant star β Leonis seemed to rise regularly in the early morning. It is for this reason that the star was identified with the deity. As the deity failed to be recognised later on, the lordship or identity was transferred to another deity, Aryaman.

We may also set forth an explanation why the same nakṣatra is used in the singular and dual in two places.

The asterism *Uttaraphālgunī* is made to consist of two stars, the brilliant β Leonis, placed near the ecliptic, and 93 Leonis, a less brilliant star and placed further north at a distance from the ecliptic. It seems to me that at the period when the asterisms were first recognised the lower star β Leonis placed close to the ecliptic was alone taken to represent the asterism, as the other was at a great distance from the equator. Later, when the equator, owing to the precession of the equinoxes, came closer to the asterism, the upper star, now comparatively nearer to the equator, was also taken into account and now the asterism was made to comprise the two stars. Although all the astronomical works recognise the above two stars in the asterism, one of them (*Jyotiṣasāra*) recognises only a single one, thus adhering to the old idea.

In this connection we may briefly discuss the deity *Vidhātṛ*. The name of this deity occurs twice in the *Rigveda* (VI. 50. 12 ; IX. 81. 5) as a distinct personality, where he has been invoked along with several other deities. In two other places (X. 82. 2, 3) *Viśvakarman* has been designated as *vidhātā* or disposer (of the world). In the *White Yajurveda* the term is found twice as an attribute of *Viśvakarman* (17. 26-7) and once of *Agni* (32. 10). In the *Atharvaveda* the name occurs thrice as a distinct deity and he has been invoked for various purposes (III. 10. 10 ; V. 3. 9 ; XIX. 37. 4). *Vidhātṛ* as a distinct deity does not appear in the *Brahmanas*, although in one place (*Gop. Br. Utt. 1. 10*) the moon has been called *dhātā* and *vidhātā*. Hence we may conclude that *Vidhātṛ* also fell into disregard as a distinct deity in the Brahmanic times. Evidently he took a less prominent part than *Dhātṛ*.

3. *Pitarāḥ*. The term has been used in the *Rigveda* more than fifty times to mean forefathers or ancestors. Again the words *pitarām* and *pītarām* are found to occur some fifteen times for the heaven and earth. Lastly, we have one complete hymn

(X. 15) and some ten or more passages in which are invoked deities collectively known by the above name (pitarah).

We find a number of characteristics of the deities in the Rigveda and that some of them are repeated in the other Vedas. They have been qualified as high or highly-placed (*parāsa*), middle or belonging to the middle region (*madhyama*) and low or belonging to the lower region (*avara*) (X. 15. 1); they have also been said to be foremost (eastern) (*pūrvāsa* or *pūrva*) (X. 15. 2, 8, 10), uppermost (*uparāsa*), as remaining on the earth, in the dust (atmosphere) and in the heaven (*vikṣu*) (X. 15. 2); further, they are said to reside near the ruddy one (*aruṇī*) (X. 15. 7) with the Devas (X. 15. 9), remain satisfied by themselves in the heaven (X. 15. 14), and ride on the same chariot as Indra and Devas (X. 15. 11). They have been referred to as known, unknown and as present in the sacrifice or not (X. 15. 13). They are stated to have once offered the Soma libation (*Somyāsaḥ*) and to be fond of Soma (X. 15. 1, 5, 8). Some of them are stated to have been fire-burned and others not so (X. 15. 14). They have been regarded as self-luminous (*svarāt*) (X. 15. 14) and as pervaded with fire (X. 15. 11). They have been said to be propitious, composers of hymns, truthful, intelligent, and performers of sacrifice (X. 15. 9, 10). In this connection we get several names, viz. Kavyas (X. 14. 3), Angirases (X. 14. 4, 5), Atharvas (X. 14. 6), Bhṛguś (X. 14. 6), and Vasiṣṭhas (X. 15. 8), evidently the names of deceased persons of the respective families regarded as the Pitṛs. The Pitṛs have been requested to sit on the south of the place of the sacrificial fire (X. 15. 6) and have been invoked for happiness (X. 15. 4), protection (X. 15. 4, 5), riches (X. 15. 7, 11), and that they may not be offended by defects (in the sacrificial ceremonies) (X. 15. 6).

The deities have many times been referred to in the White and Black Yajurvedas, both in original passages and in hymns borrowed from the Rigveda. In the White Yajurveda they have been called the 'heavenly folk' (3. 55) and are said to live in Yama's realm (19. 45). They have been invoked as heroes, conquerors of armies, etc. (29. 46), and again for a good, brave son (2. 33) and for various other gifts. In the other work they have been eulogised many times in connection with various sacrifices. They have been said to guard Agni Āngiras on the south with the swiftness of the wind (I. 2, 13). The world where the Pitṛs sit is pure (1, 3. 1, 6). In many things they seem to be opposed to the gods.

The Pitṛs have been invoked many times in the Atharvaveda. Many deceased sages seem to have been invoked as Pitṛs (XVIII. 3. 16, 20). They have been said to represent the arrows of the southern quarter (III. 27. 2). Yama has been called their overlord (V. 25. 14; XVIII. 2, 25). They have been invoked in marriage ceremonies for protecting the

bridegroom and bride and for progeny (XIV. 2, 73). They have been praised several times in connection with funeral ceremonies: Thus, they have been requested to come on the south (XVIII. 1, 42); the deceased person has been said to get a place among the Pitṛs (XVIII. 2, 25; XVIII. 4, 64; etc.). We hear of Pitṛs that sit on the earth, in the atmosphere, and in the sky (XVIII. 4. 78-80). Again, we have a passage where the lowest heaven is called watery, the mid-heaven starry, and the fore-heaven, third one, the abode of the Pitṛs (XVIII. 2, 48).

We have numerous references to the Pitṛs in the Brahmanas. They have been regarded as gods (Kauṣ. Br. 5. 6; Gop. Br. 1. 24). They are invisible to man (Śat. Br. 2. 4. 2. 21; etc.). They reside in the south (Taitt. Br. 1-6. 8. 5; Śaḍ. Br. 3. 1; etc.), in an intermediate quarter (Śat. Br. 1. 8. 1. 4; 2. 6. 1. 10, 11; etc.) and in the third sky (Tāndya Br. 9. 8. 5; Taitt. Br. 1. 3. 10. 5; 1. 6. 8. 7). Their home, the *pitṛloka*, is placed below (*adha*) (Śat. Br. 14. 6. 1. 10) and its gate is situated on the south-east corner (Śat. Br. 13. 8. 1. 5). Three grades of Pitṛs have been recognised: *Somavanta* (connected with Soma), *Varhiṣadaḥ* (seated on Kuśa grass), and *Agnisvātta* (pervaded with fire) (Śat. Br. 5. 5. 4. 28; 14. 1. 3. 24). Soma, again, has been called the lord of Pitṛs (Śat. Br. 3. 2. 3. 17). The Pitṛs have been regarded as the subjects of Yama (Śat. Br. 13. 4. 3. 6; etc.). The world of the herbs belongs to the Pitṛs (Śat. Br. 13. 8. 1. 20). Again Maghā (one of the lunar asterisms) has been said to belong to them (Taitt. Br. 1. 5. 1. 2; 3. 1. 1. 6).

As just mentioned, we find that the nakṣatra Maghā has been called Pitṛ in Vṛhatvasiṣṭha-siddhānta (8. 21), Soma-siddhānta (4. 6. 34), and Sūrya-siddhānta (8. 18); again, the Pitṛs are regarded as the lords of Maghā in Yājñajyotiṣa (sl. 32) and Āraṇyaka (sl. 25).

There is not the least doubt that the Pitṛs or Fathers represent the dead ancestors or their departed souls dwelling in the heaven.

The Pitṛs are characterised by their intimate connection with Yama, who is their overlord and of whom they are subjects. Their place has been assigned to the south. Lastly, they are connected with the asterism Maghā. We shall now see how we can reconcile these statements. We find in Viṣṇupurāṇa (II. Ch. 8) that in ancient times the sun's northward shifting (*uttarāyana*) used to begin in the sign Capricorn and end in the sign Gemini and that his southward movement (*dakṣiṇāyana*) used to begin from the sign Cancer to end in the sign Sagittarius. Thus we know that the summer solstice was placed at the end of Gemini or nearabout and the winter solstice at the end of Sagittarius. We are again told that the path of the Pitṛs is known as Mṛgavīthi, which comprises the asterisms Śravaṇā, Śatabhiṣā, and Pūrvabhādrapada. Śravaṇā forms

the middle portion of the sign Capricorn. Śatabhiṣā and one-fourth of Pūrvabhādrapada form the next sign Aquarius. Strangely enough we find that the asterism Dhanīṣṭhā which is placed between Śravanā and Śatabhiṣā is missing here. We do not know whether it was omitted by an oversight or was not counted at the time owing to its smallness in size. In any case we come to know that the path of the Pitṛs used to begin with the winter solstice and end in the vernal equinox. This part of the year forms the coldest period and the death-rate, particularly of elderly persons, is highest at this time. As Yama is the god of death, it is easy to understand why he has been regarded as the lord of the Pitṛs and the Pitṛs as his subjects. Their abode in the south is easily explained when we note that the winter solstice is the southernmost point of the ecliptic with reference to the celestial equator. As regards their connection with Maghā, one cannot definitely say how the idea actually arose. We can only find that when the sun used to come to the winter solstice, placed at the end of the sign Sagittarius or the beginning of Capricornus, the asterism Maghā used to appear in the heaven at night. This is why (it may be suggested) the Pitṛs were made the lords of the asterism, the junction star of which, viz. Regulus, is the largest and most prominent star in the heaven. One cannot consider that the winter solstice was placed near the asterism Maghā, since this would carry us back to 15000 B.C., a date which is not warranted by other evidences.

4. *Bhaga*. The term occurs about one hundred and twenty times in the Rīgveda. The term seems to refer to the deity about seventy times or so; elsewhere it has been used for fortune or wealth, or used as qualifying Fire, the Sun or Puṣan, having the significance of distributor (of wealth). In many passages we cannot be sure whether we are dealing with the deity or with the word used in the above sense. In spite of the fact that he has been invoked so many times, we can deduce very few attributes of the deity. He is one of the Ādityas (I. 14. 3; VII. 41. 1). We hear of his chariot (X. 64. 10; X. 93. 7) as in the case of many other deities. He is brilliant (II. 31. 4; V. 32. 5); he spreads his rays (I. 144. 3); we also know the rays of his eyes(?) (II. 136. 2) and his splendour (X. 68. 2). He is called the distributor (VII. 41. 2) or the dispenser (V. 46. 6). He is invoked in marriage ceremonies with other deities (X. 85. 23, 36). We hear of his path (III. 54. 14). Dawn is his sister (I. 123. 5).

The word occurs some ten times in the White Yajurveda. The deity is meant on some four occasions, but the word is used in other places for wealth, bliss or fortune. In the Black Yajurveda, the deity has been thrice invoked.

The word is seen some sixty times or more, in the Atharvaveda, referring to the deity about forty times. In the

remaining places the term is used in the sense of fortune, splendour, enjoyment and perhaps in two passages (I. 14. 1, 4) for the female external organ of generation. The deity has been eulogized in the mantras for marriage ceremonies (XIV. 1. 20, 50, etc.) with several other deities and for increase in progeny (XIV. 2. 13). He is formidable (III. 16. 2) and remains in the night watch (VI. 21. 2). He is asked to deepen the ploughing (III. 12. 4).

Yaska, in his *Niruktā* (12. 13), regards him as the presiding deity of the forenoon.

Bhaga is regarded as the presiding deity of the asterism *Purvaphālgunī* (consisting of two stars, δ and θ Leonis) in *Yājusaṃjyotiṣa* (sl. 18, 32), *Āraṇjyotiṣa* (sl. 14, 25), *Pitāmaha-siddhānta*, and *Vṛhatvasiṣṭha-siddhānta*.

Oriental scholars regard Bhaga 'as a god in general' of the Indo-European period, as the word occurs in the Avesta as *bagha*, signifying 'god' and also in old Church Slavonic as *boḡi*, having the same significance. The term 'cannot have attained a more specialized sense than 'bountiful god' if indeed it meant more than merely 'bountiful giver' (Macdonell's *Vedic Mythology*, p. 45).

I am inclined to believe that the deity gained a specialisation in the Vedic times. The significance of the word *bhaga* as fortune or wealth, and the eulogies of the deity in connection with the deepening of ploughing and, lastly, his connection with the asterism *Pūrvaphalgunī*, either as the asterism itself or as its presiding deity, lead one to the same view. The fortune or wealth of the sages in the Vedic times principally consisted of crops of barley (perhaps wheat as well), which grow only in the high lands of the Punjab and United Provinces in the cold weather. When the vernal equinoctial point was passing through the end of the sign Taurus or beginning of Gemini, the asterism *Uttaraphalgunī* used to rise at the end of night towards the dawn during spring when the crops used to ripen. Hence if we take the asterism to represent the deity either by itself or as its presiding lord, we have a distinct deity in Bhaga on whom used to depend the fortune of the sages according as they had a good crop or not. This, being the best and suitable period of the year, free from heat, cold and rain and with plenty of provisions, used to be selected for marriage ceremonies. The few characteristics of the deity that we know can be well accounted for if we accept this view.

5. *Yama*. The word occurs some fifty times in the *Rigveda*. It is used in the significance of 'restrainer or controller' in some seven passages occurring in the first (I. 66. 4; I. 73. 10), second (II. 5. 1), third (III. 27. 3), fifth (V. 61. 2), seventh (? VII. 33. 9), and eighth *maṇḍala* (VIII. 24. 22); in one place (X. 8. 4) the term *Yamayoh* is used for a pair. Elsewhere the term indicates the deity under consideration.

been the first to ride on it (I. 163. 2). The sacrificial horse is said to represent Yama, Āditya, and Trita (I. 163. 3).

Lastly, in the dialogue between Yama and Yamī (X. 10), they call themselves children of Gandharva and the water nymph. Yamī wanted to have sexual union with Yama, her twin brother, but Yama rejected the proposal.

Yama's name is found in some twenty-five places or more in the White Yajurveda. No further information is found here. He has given a place on the south for the comers (that is, the fathers) to rest in (12. 45). Yama remains in the highest heaven along with Yamī (12. 63).

Yama has many times been invoked in the Atharvaveda. What we have already seen in the Rigveda is more or less repeated here. Yama is the overlord of fathers (5. 24. 14); he makes seats for the fathers (18. 3. 52). He is the master of bipeds and quadrupeds (6. 28. 3). He is provided with arrows (12. 3. 56). He was the first of mortals, who died and went to that world (18. 3. 13). Death is his messenger (18. 2. 27). He is the father of sleep (6. 46. 1); sleep is the agent of Yama (6. 46. 2; 16. 5. 1) and is the instrument of Yama (19. 57. 3). In a funeral verse (18. 3. 66), we are told of an eagle in the firmament, golden winged messenger of Varuṇa, busy bird in the lair of Yama.

There are some references to Yama in the Brāhmanic literature. The southern quarter belongs to Yama (Śat. Br. 14. 6, 9, 22). Anurādhā, the first, and Apabharanī, the highest, are the two asterisms of Yama (Taitt. Br. 1, 5. 2, 7). The earth is Yamī (Śat. Br. 7. 2. 1, 10).

According to Yājuṣajyotiṣa (sl. 34) and Āraajyotiṣa (sl. 9), Yama is the presiding deity of Bharanī, which is named Yamalā in Somasiddhānta (4, 6, 7).

Yama and Yamī correspond to Yima and Yimeh of the Indo-Iranian period. Yima, as a god, is found in the Avesta. He is beautiful and is the owner of a good flock (Vendidad II. 4). He is the son of Vivanhās (Sun), as the recorder and bearer of the law (Vend. II. 8). He enlarged the world of Ahura Mazda, made it fruitful, and obeyed him as a protector, nourisher, and overseer of the world (Vend. II). Yimeh is mentioned in the later Iranian literature (Spiegel, *Iranische Altertumskunde*, I, p. 527), as the sister of Yima, who, with her brother, formed the first human couple.

The physical nature of the deity has been fully discussed by oriental scholars (see Macdonell's *Vedic Mythology*, p. 173). I shall first consider the deity in his relation with the dead and then the twins, Yama and Yamī.

In spite of the diverse opinions of the scholars, there is no doubt that Yama is intimately connected with the dead and that people reach his kingdom only by death. Let us see what led to the idea of the god of the departed. Although death is

a natural phenomenon in the living world, still the loss of people, sometimes in numbers, as in an epidemic, was keenly felt. Further the death of elderly people was regarded as a heavy loss to the community. Under these circumstances they were obliged to look for some preventive measures and were thereby led to think of some supernatural (divine) power as an agent in the causation of death, an obeisance to whom might give some relief. This ultimately led to the conception of a presiding god of death. Such an idea is well revealed in the passages of the Vedas. The idea was also current that Yama was the first mortal who died and went to heaven. We know that the greatest number of deaths, specially of elderly people, occur in the winter and to a less extent in the autumn. These two seasons in the north-west region of India more or less correspond to that part of the year which is included between the autumnal equinox and vernal equinox through the winter solstice. We have seen above (in the Taitt. Br.) that Anurādhā and Bharanī are the two asterisms of Yama. Anurādhā is called the first and Bharanī is called the highest (*uttama*) ; they are placed at a distance of about 190° from each other. This evidently indicates that the influence of Yama on death was particularly manifested in that part of the year which was placed between the risings (in the early morning) of the two asterisms. The origin of this idea will be understood, if we think of a time when the autumn equinox was near Anurādhā and the vernal equinox near Bharanī. Again, as this half of the ecliptic falls to the south of the celestial equator, the southern region of the heaven is assigned to Yama. Varuṇa's seat near Yama's is also explained when we remember that Satabhisa, the presiding deity of which is Varuṇa, is placed within 90° of Bharanī, between it and Anurādhā. Yama's friendship with Agni no doubt refers to the agency of the latter in burning the body before the dead can go to Yama. The two dogs of Yama seem to be the two stars of Mūlā (Viertau) (which we have already discussed). The pigeon of Yama, however, can only doubtfully be identified with the constellation Columba, as 'it is supposed to have received its name as early as the 16th century' (Whyte's *Constellations and their History*, p. 242). It is, however, possible that it was recognised in the Vedic times. Yama's horse, again, may be the constellation figure of Pegasus. The streams in the neighbourhood of his abode and the plentiful supply of water in the places that he assigns to the dead are indications of scarcity of water elsewhere; they are referable to the portion of the milky way in the signs of Taurus and Gemini. The eagle of Varuṇa, his golden-winged messenger, seems to be the constellation figure of Aquila.

Yama and Yami are traceable to the Indo-Iranian period as Yima and Yimeh. The name of Yima is found in the Avesta where we come to know something about him. Yimeh is not

mentioned there and seems to appear at a later period. Comparing the attributes of Yama as the god of the dead in the Vedas with those of Yima of the Avesta we are inclined to believe that they are separate deities or, at least that the conception regarding their physical nature was different, in spite of the fact that both are regarded as the sons of the sun. It is highly probable that Yima is different from Yama, and Yima and Yimeh came down to the Vedic period as Yama and Yami. The myth that Yima and Yimeh were the first living couple was probably consistent with the prevalent custom of the Indo-Iranian people of marriage between the brother and sister; as the custom changed in later times, the Vedic sages considered such pairing objectionable and hence the refusal of Yama to Yami's proposal. It is also highly probable that Yama as the god of the dead was a conception which originated in later Vedic times. The real physical basis of Yama and Yami has been sought by Max Müller in the day and night. In Śatapatha Brahmana the earth is called Yami. Hence they may mean heaven and earth.

6. *Rudra and Rudras*. The names of Rudra and Rudras occur some hundred times in the Rigveda, excluding those passages where the Maruts have been addressed as Rudra's sons. The terms, however, have been used in three senses: First, the term in the singular has been made to qualify certain deities. Secondly, we have a deity by the same name. Thirdly, the term in the plural indicates a group of deities under the name of Rudras. The term has been used to qualify Agni (I. 27. 10; II. 1. 6; V. 3. 3; etc.), Asvins (I. 158. 1; II. 1. 6; VIII. 26; 5; etc.), Soma (IX. 73. 7) and Mitravaruṇa (V. 70. 2), probably signifying redness, lustre or fearfulness. Further we have mention of a red cloud (VIII. 63. 12). Asvins have also been addressed as *rudravartman* (I. 3. 3; VIII. 22. 1, 14) having a bright path (referring perhaps to the morning light).

Rudra, as a deity, has been invoked with others in several places (V. 41. 2; V. 51. 13; VI. 62. 8; X. 93. 4; etc.). He has also been addressed as the father of Maruts (I. 33. 1), Tryambaka (VII. 69. 12), Varāha (I. 11. 4, 5), and Vṛṣabha (II. 33. 4, 7, 8, 13). Rudra possesses numerous characteristics. He lives in the heaven (I. 114. 5; II. 33. 15). He is brilliant (I. 114. 4, 5; V. 42. 11; etc.), glittering like gold (I. 43. 5), and bright like the sun (I. 43. 2). He is of a whitish colour (II. 33. 8) and is also reddish-brown (II. 33. 5, 8, 9; etc.). He is multifarious (II. 33. 9, 10). He is bent to one side (I. 114. 4). He is youthful (II. 33. 11) and strongly built (II. 33. 9); there is none stronger than Rudra (II. 33. 10); he is strong-armed (II. 33. 3) and is called *asura* (I. 122. 1; V. 42. 11) evidently referring to his unusual strength; he is called the boldest of the bold (II. 33. 3). He has a well-formed nose (II. 33. 5) and has braided hair (I. 114. 1, 5). He has got brilliant gold on his body (II.

33. 9) and has a necklace (II. 33. 10). He holds a strong bow in his hand (II. 33. 10, 14; VII. 43. 1) and is a sharp archer (VII. 46. 1). He remains seated on the chariot (II. 33. 11). He has an army (II. 33. 11). He is the lord of the world (II. 33. 9; VI. 49. 10). He is the best of the physicians (II. 33. 4) and has 1,000 medicines (VII. 46. 3); he holds healing drugs (II. 33. 7); he has been prayed to for the cure of diseases (I. 43. 4), particularly cholera (*visucī*) (II. 33. 2) and for a life extending over a hundred winters (II. 33. 2). Rudra is said to pour down rain from the firmament with the help of the Maruts (X. 92. 9). We are also informed of his disposition. He is hot-tempered (II. 33. 9, 11; X. 126. 5), dreadful like a beast (II. 33. 11), and destructive in nature (II. 33. 11). His harmful disposition is clearly shown in the way he is invoked (VII. 46. 4) to do no harm to the children and elderly sons (VII. 46. 3), not to make one ill (VII. 46. 2), not to be offended with the people (II. 33. 4, 5; VII. 46. 4; etc.), to hold back his weapon and evil will from the people (II. 33. 14), and to slacken the chord of the bow (II. 33. 14). He is also invoked not to deprive one of the sight of the sun (II. 33. 1) and to protect one from Rudra's thunder which travels from the firmament to the earth (V. 51. 13).

Two other deities, Keśin and Vāgdevī, are found connected with Rudra. The first one is brilliant and provides all the worlds with light (I. 136. 1); he holds the fire, water, heaven, and earth; he visits the wandering places of the apsaras, gandharvas, and deer (I. 136. 6). When Keśin drank water in the (same) pot with Rudra, Vāyu agitated it (water) and broke down the inflexible (X. 136. 7). Vāgdevī is said to help Rudra in stretching his bow when the latter makes ready to kill the enemy; she fights for the people (X. 125. 6). She travels with the Rudras and Vasus (X. 125. 1).

Lastly, we have a group of deities collectively called Rudras. They have been mentioned several times with Indra (II. 32. 2, 3), Agni (I. 58. 3; VIII. 103. 14; X. 32. 5), and with Rudra himself as the chief of the Rudras (X. 64. 8) and invoked to be propitious to the Rudras (VII. 35. 6). They are often associated with the Vasus (I. 45. 1; II. 31. 1; X. 66. 4, 12; etc.). Aditi is their mother (VIII. 101. 15).

Rudra is invoked or otherwise mentioned some fifty times in Vājasaneyi Samhitā. Most of the attributes of Rudra that we find here are undoubtedly derived from the Rīgveda. He has also been addressed as Tryambaka (3. 58, 60) and Pāsupati (lord of beasts) (6. 32; 9. 39; etc.). Ambikā is his sister (3. 57). Rudra used to be invoked at dawn (34. 34; 38. 16). His neck is azure and the body is red (16. 7); he is hundred-eyed (16. 12) or thousand-eyed (16. 8; 16. 29); he is golden-armed. He is clothed in a garment made of skin (3. 61). He is hundred-bowed (16. 29) and again holds a shaft in his hand (16. 1). He

is a mountain-dweller (16. 2, 3, 4). He is a divine physician (16. 5) and is the lord of plants (16. 19) ; his is the healing medicine (3. 59). He is the leader of hosts and lord of regions (16. 17). He is a husband-finder (3. 60). Herdsmen and girls carrying water have looked at him (16. 7). In addition, we have Īśāna (39. 8), Nilagrība (16. 28), Paśupati (16. 28 ; 39. 8), Mahādeva (39. 8), Śarva (16. 28 ; 39. 8), and Śitikanṭha (16. 28). Homage is given to them individually. Lastly, we have Rudras, Bhavas, and Śarvas. Rudras have traits similar to those of Rudra (16. 58-66). They are said to maintain their stations in the regions and surround Rudra (16. 6). They are lords of assemblies and masters of horses (16. 24), lords of troops and sharpshooters (16. 25) and overlords of the southern region (15. 11). Their throats are white and necks are blue (16. 56). They remain in the sky (16. 56) and again are innumerable on the surface of the earth (16. 54). They are bright (15. 11). They are connected with summer (21. 24) and with rain (33. 50). Bhavas (16. 55) live in the air and Śarvas (16. 57) live beneath the earth.

Rudra is mentioned several times in Taittiriya Samhitā. He has a dart (1. 1. 1). He guides in the path of Mitra (1. 2. 4). We have mention of Paśupati (1. 4. 36 ; 4. 5. 5), Bhava (1. 4. 36 ; 4. 5. 5), and Sarva (1. 4. 36 ; 4. 5. 5). Rudras are also invoked with Vasus and Ādityas (1. 11, 13). They remain on the earth (4. 5. 11). Bhavas live in the air (4. 5. 11). Sarvas with black neck and white throat, wander below the earth (4. 5. 11).

Coming to the Atharvaveda, we find that many traits of Rudra and others as depicted in the Rigveda are repeated here. Rudra has been invoked many times alone, with the Rudras (19. 10. 6), with Paśupati, Bhava, and Śarva (12. 8. 9). He is thousand-eyed (11. 2. 3), blue-locked (11. 2. 7) and immortal (11. 2. 3). We are informed of his dark crests (2. 27. 6), his breath, noise, and pangs (11. 2. 3). He has got healing remedies (2. 27. 6) and the disease is his name (6. 44. 3). Takman (fever) and Kāsika (cough) are his weapons (11. 2. 22). He has a golden-yellow bow (11. 2. 12). He has a one-shafted and hundred-tipped arrow (6. 57. 1). He has a club (11. 2. 19). He has been called hundred-weaponed (11. 2. 12). He is considered to be the lord of cows, horses, sheep, goats, and men (11. 2. 9). He has dogs (11. 2. 30). Rudra has been invoked as Bhava and Śarva (11. 2). Rudra is said to remain in the fire, within the waters, in the herbs and trees, and is said to have shaped all living beings (7. 92. 1). Yakṣa within the waters belongs to Rudra and the waters of the heaven increase their flow for him (11. 2. 24). Rudra marks the fall of Kesin's chariot (12. 2. 18). Īśāna, Ugradeva, Paśupati, Bhava, Mahādeva, and Śarva are not only invoked, but have been given a more prominent place than in the other Vedas. All of them are archers. Assigning a

fixed quarter to Rudra (15. 5. 10), Ugra is regarded as the lord of the northern quarter (15. 5. 8), Paśupati of the western quarter (15. 5. 6, 7), Bhava of the eastern quarter (15. 5. 1), Mahādeva of the southern quarter (15. 5. 7), and Śarva of the upward quarter (15. 5. 7). Īśāna is regarded as the lord of all the quarters (15. 5. 15). Paśupati is regarded as the lord of bipeds and quadrupeds (2. 24. 1; 12. 8. 9), but the term seems also to be used for qualifying Bhava (11. 2. 28) and Rudra (11. 2. 5). Bhava has been invoked with Rudra (3. 16. 1; 11. 2. 14), with Ugra and Śarva (15. 5. 9), and with Soma and Īśāna (15. 5. 3). Bhava has been invoked with Śarva to prevent epidemics (11. 2. 2). Mahādeva has been invoked with all the other deities except Rudra (5. 21. 11). Śarva has been called spotted-armed (8. 8. 17). Rudras have also been invoked in the present work. They have once been addressed with Rudra (19. 10. 6). They are sky-reaching (5. 3. 10), of keen brightness (19. 9. 10). They are twice associated with Vasus (8. 8. 12; 10. 7. 22) and four times with the Vasus and Ādityas (10. 7. 22; 12. 2. 6; 19. 9. 11; 19. 11. 4).

Turning to the Brahmanic literature, Agni (fire) is said to have nine forms: Aśani, Īśāna, Ugra, Kumāra, Paśupati, Bhava, Mahādeva, Rudra, and Śarva (Śat. Br. 6. 1. 3. 18). Aśani is regarded as lightening (Śat. Br. 6. 1. 3. 14). Īśāna is considered as an Āditya (Śat. Br. 6. 1. 3. 17). He dwells in the south (Jaim. Uttar. 3. 21. 2). He divides into ten, he is the rays of the sun which, becoming life, reside in all living beings (Jaim. Utt. 1. 29. 3, 4). The herbs and trees belong to Ugra (Kaus. 6. 5). Kumāra, according to Amarakoṣa is Rudra's or Agni's son. He was born in the *sambatsara* (Śat. Br. 6. 1. 3. 8-10). *Sambatsara* is Kumāra (Śat. Br. 11. 1. 6. 5; 11. 1. 6. 3). The herbs belong to Paśupati, from whom the animals get their medicine (Śat. Br. 6. 1. 3. 12). Vāyu is from Paśupati (Kaus. 6. 4). Bhava is external (Śat. Br. 1. 7. 3. 8). The cloud is Bhava, all those exist from the cloud (Śat. Br. 6. 1. 3. 15). Water arises from Bhava (Kaus. 6. 2). Agni is Rudra (Śat. Br. 5. 3. 1. 10; Tāṇḍya Br. 12. 4. 24; etc.). The Moon is Rudra (Kaus. 6. 7). He is fulfiller of desire (Kaus. 3. 4. 6; Śat. Br. 13. 3. 4; etc.), lord of beasts (Śat. Br. 1. 7. 3. 8; etc.), awful (Kaus. 16. 7), and is provided with a dart (Sūla) (Ṣaḍb. Br. 5. 11). We have mention of his arm (the nakṣatra Ārdrā, according to Śayana) (Taitt. Br. 1. 5. 1. 1). Rudra arose from a weeping (raining?) one (Śat. Br. 6. 1. 3. 10), Mṛgavyadha (the star Sirius) is Rudra (Aitar. Br. 3. 33). Rudra is the lord of the northern (upper) region (Śat. Br. 2. 6. 2. 7; etc.). Rudra is said to have killed the cow (Tāṇḍya Br. 6. 9. 7); again the cow is called raudrī (Taitt. Br. 2. 2. 5. 2). Ambikā is Rudra's sister (Śat. Br. 2. 6. 2. 9; Maitr. Sam. 1. 10. 20); she is 'autumn' (Taitt. Br. 1. 6. 10). Again 'autumn' is called the place of (origin of) Rudra (Maitr. Sam. 1. 10. 20). Ambī is the wife

of Bhava, Tryambakas are from her (Mait. Sam. 1. 10. 20). Sarva remains in the south (Śat. Br. 1. 7. 3. 8). Lastly, we have the Rudra. They are from the southern direction (Ait. Br. 8. 14). They are invoked by the summer (Tait. Br. 2. 6. 19. 1). They are inaugurated in the midday, while the Vasus are celebrated in the morning and Ādityas in the third part of the day (Śat. Br. 14. 1. 1. 15; Taitt. Br. 1. 5. 11. 3). Their number is fifteen (Taitt. Br. 2. 6. 19. 1) or eleven (Taitt. Br. 1. 5. 11. 3). The eleven Rudras are thus enumerated in Mahābhārata (I. 66. 2-3): Mṛgavyādha, Sarpa, Nirṛti, Aja Ekapāt, Ahirbudhnya, Pinākin, Īśvara, Kapālī, Sthānu, Bhaga, and Rudra.

In the old astronomical works we find that most of deities in question are the presiding gods of the various asterisms. Rudra is the lord of Ārdṛā (Yājuṣajyotiṣa sl. 10, 32; Ārcajyotiṣa sl. 9, 25; Somasiddhānta 4, 6, 9). Mṛgavyādha is the star Sirius, Sarpa is the asterism Asleśhā or its presiding deity (Y. sl. 10, 32; A. sl. 9, 25; Pitāmaha-siddhānta; Vṛddhavasistha-siddhānta 8, 20). Nirṛti is the lord of Mūlā (Y. sl. 33; A. sl. 26), Aja Ekapāt is the lord of Purvabhādrapada (Y. sl. 10, 34; A. sl. 9, 27). Ahirbudhnya is the lord of Uttarabhādrapada (Y. sl. 18, 34; A. sl. 14, 27; etc.). Bhaga is the lord of Purvaphalgunī (Y. sl. 18, 32; A. 14, 25; etc.).

In Nighaṇṭu (5. 4, 3), the term Rudra is made to signify 'one who cries, makes a noise or gives rise to a downpour (of rain); one who makes (the enemies) cry. A passage (quoted from Hāridrava, a recension of Maitrāyaṇī Saṃhitā) means that Rudra repented and shed tears after having pierced the father Prajapati with an arrow. If the term is made to derive from the root *rud* to be ruddy, it may mean the 'red one' (Pischel) (cf. the ancient Iranian word *raoidita*, reddish).

According to oriental scholars, Rudra is a storm-god or tempest-god. His mischievous side is attributed to the destructive agency of light. From his name he is connected with thunder (one who makes noise). The suggestion (Macdonell's *Vedic Mythology*, p. 77) that 'his beneficent and healing powers would be based partly on the fertilising and purifying action of the thunderstorm and partly on the indirect action of sparing those whom he might slay' does not appeal to me.

Some of the traits of Rudra, namely, his pouring down of rain from the firmament with the help of the Maruts and his connection with the thunder, no doubt connect him with storms and rains which characterise the summer monsoon, generally starting sometime after the summer solstice. The attribute of Rudra as a physician with his healing herbs (used as drugs) and the obeisance to him for the prevention or cure of diseases, particularly of children and young men, bring him into close connection with the autumn (after the rains have started and

have continued for some time). This is further confirmed in Maitrāyaṇī Samhitā, where Rudra is said to have his birth in the autumn. Last of all, the characteristic peculiar to him and a few others (who are with one exception, nothing but his counterparts) is that he is an archer. This, with the note that Rudra lives in the heaven; leads us to the idea that Rudra is nothing but the sign Sagittarius which used to appear in the Heaven at dawn in the autumn when the observations were made. Plunket in his *Ancient Calendars and Constellations* (pp. 151-161) advanced this view. He also proved that the traits and deeds of Greek god Kiran are exactly similar to those of Rudra and in his myth we are told that he had his place in the sign Sagittarius after his death. He was thus made the presiding god of all the physical phenomena of the time. We can easily explain the various attributes of Rudra if we accept this view. His brightness and golden ornaments are attributable to the bright stars in the constellation and the milky way passing through its upper part. His strength and youthfulness have been taken from the distressing effect of the thunderstorm, which was taken to be one of his deeds. The peculiar configuration of the constellation, half-man and half-goat perhaps led to his attribute as 'multiform'. His hot-temper, dreadfulness and destructiveness are all accountable to the storms which are due to him. Rudra's hundred or thousand eyes and his hundred bows are the parabolic expressions of his bodily features and weapon. We do not know whether the herdsmen and girls carrying water actually refer to mortal beings frightened from the advent of storms, or to Cepheus (the constellation figure of which represents a herdsman with his flock of sheep) and Aquarius (representing a *man* holding a bucket on his shoulder) which used to appear in the sky with Sagittarius. His attribute as a husband-finder led to the practice of giving by young girls of offerings to Siva for a good husband. The origin of the idea is perhaps to be sought in the activity of strong hardy persons in rescuing people during the distressing storms and drawing the attention of girls to seek husbands amongst them. The great distress and mortality amongst goats, sheep, cattle, and even men, thought to be caused by Rudra and to be preventible by paying homage to him, perhaps led to the idea of his lordship over animals. The name Tryambaka meaning three-eyed is explained by Plunket in a very ingenious way : he holds that the third crescentic eye is nothing but the half moon which used to rise in the sign Sagittarius at about 4000 B.C. when the autumnal equinox was in this sign.

We have already seen that, while Rudra alone is found to be invoked in the Rigveda, a number of other deities are closely associated in the other vedas. Their number has increased gradually from the Yajurvedas to the Atharvaveda where they hold a prominent place equally to Rudra. They are all archers

and different directions are assigned to them round a fixed quarter of Rudra. They have been addressed in various combinations and many times with Rudra himself. In the Brahmanas they are regarded as forms of Agni. As we know, they are now considered as the names of the god Siva. We may reasonably assign their origin to the division of the original large constellation Rudra into so many forms each bestowed with certain attributes. Their actual nature seems to have been forgotten in the Brahmanic period. We have sufficient evidence of the division of larger constellations into smaller ones in past times: I may just mention one, named Ophiuchus, placed just above Sagittarius. It has the figure of a male holding a snake in both hands. He was regarded as a great physician in Greek Mythology. The Arabs used to represent him as a shepherd and he was assigned a mischievous disposition (Whyte's *Constellations and their History*, p. 199 and Smyth and Chamber's *Cycle of Celestial Objects*, p. 495). Evidently, this was derived from an originally larger sign Sagittarius and was made a new one.

Lastly, the Rudras were recognised as early as Rudra, who was considered their chief. Taking the significance of their name as 'bright one' or 'red one' and considering their general traits, we may take them to be neighbouring asterisms not yet definitely recognised by distinct names. This is distinctly shown by the names of eleven Rudras, as enumerated in the later Sanskrit literature, where they are all connected with the asterisms.

In this connection we may also consider the nature of Keśin and Vāgdevī. The characteristics of Keśin lead us to follow Sāyaṇa and consider him the sun. His drinking of water with Rudra from the same pot refers to his arrival in the sign Sagittarius. The fall of his chariot indicates the southward passage of the sun after the autumnal equinox. Vāgdevī seems to be the goddess who was held responsible for the sounds in the storm apart from the thunder.

7. *Vasus*. The term Vasus occurs more than fifty times in the R̥gveda. It seems to signify food (*anna*) in one passage (VII. 1, 2) and money, fortune or prosperity in several others. In several places the word has been used to qualify various deities, as Agni, Indra, R̥bhus, Maruts, Mitra, Varuṇa, and Viśvadevas, evidently indicating them as 'givers of prosperity'. Lastly, in some thirty-six passages the term is meant for the deities under consideration.

Vasus as deities have been invoked alone and with others; on several occasions they have been addressed in conjunction with Rudras and with Rudras and Ādityas.

Vasus are themselves called Ādityas (II. 27. 11; VIII. 18. 15; VIII. 18. 17). They are brilliant (V. 41. 18). They have a heat-giving wheel (*cakra*) (II. 34. 9) and a beautiful

tioned in the later Sanskrit works. Thus, (i) according to Mahābhārata (Dānaparva), they are Dhara, Dhruva, Soma, Sāvitra, Anila, Anala, Pratyūṣa, and Prabhāsa; (ii) according to Bhāgavatapurāṇa, they are Droṇa, Prāṇa, Dhruva, Arka, Agni, Doṣa, Vāstu, and Vibhāvasu; (iii) according to Vāyu- and Kūrmapurāṇa, they are Āpa, Dhruva, Soma, Dhara, Anila, Anala, Pratyūṣa, and Prabhāsa; lastly (iv), according to Amarakoṣa, they are Dhara, Dhruva, Soma, Viṣṇu, Anila, Anala, Pratyūṣa, and Prabhāsa. In these different enumerations, we may regard Anala identical with Agni, Arka with Viṣṇu and Sāvitra, Droṇa (literally meaning a cup) with Soma (the moon), Dhara with Vāstu, Pravāsa (a shining one) with Vibhāvasu and Prāṇa with Āpa. Doṣa (evening) probably corresponds to Pratyūṣa (dawn) referring to the comparative darkness after sunset and before sunrise. Thus we have Agri (Anala), Arka (Sāvitra, Viṣṇu), Āpa (Anila, Prāṇa), Doṣa and Pratyūṣa, Dhara (Vāstu), Dhruva, Pravāsa (Vibhāvasu), and Soma (Droṇa) as the Vasus.

I shall now consider what led to the idea of Vasus as deities. The significance of the term *vasu* as used in the Rigveda may reasonably make one think that the vasus were regarded as givers of food, fortune, and prosperity. We also have direct evidence in the same work and in the Atharvaveda. Vasus' cows are begged for food. They are themselves said to maintain good things and are regarded as the masters of the removal of distress. The Vasus are connected with the hot season and rains. They have a heat-giving wheel which we take to mean the sun. They served the work of fire. Their cloud-splitting and mankilling weapon is no doubt the thunder during the storm and rain. Indra's lordship and companionship of the Vasus point to the same thing. We know that the summer and rains are closely connected in northern India. The relationship of the Vasus, as the deities of fortune and prosperity, with the summer and rains can be thus accounted for: Barley and perhaps wheat(?), at least at a later period, which seem to have been the principal cereals of the people during the Vedic times, are the winter crops of the North-West India. The harvest at the end of the winter led to the storing up of the crop in large quantities. A large crop of the principal food-stuff really formed the fortune of the people during the rains, as it would give them relief at this distressing part of the year. It is for this reason that the Vasus were connected with this season.

Now what caused the Vasus to be connected with Dhanīṣtha? In Taittirīya Samhitā we find the eight vasus mentioned with four goddesses, called Śravistās, evidently connecting them with one another. As already noted, Vasus have been regarded as the asterism Dhanīṣthā or its presiding deities. Again the constellation Delphinus which is more or less coincident with

Dhanisthā formed the sky figure of benevolence in the ancient astronomy of the western people (Whyte's *Constellations and their History*, p. 179). This relation between the Vasus and Dhanisthā can only be reconciled if we suppose that, at the time when the hymns were composed from actual observations, Dhanisthā used to rise in the early part of night during the summer and rains. In such a case the vernal equinox must have been passing through the beginning of Krittikā and end of Bharanī. Some of the characteristics of the Vasus, as being Ādityas, their brilliancy and their close connection with Sravistās are suggestive of a representation of a group of stars (constellation) as their physical basis; but nothing can be definitely stated for want of further evidence.

I shall now try to interpret some passages. The boat of the Vasus may be some constellation figure in Delphinus. In Hindu Astronomy Dhanisthā is represented by a drum-like musical instrument called mṛdanga or mardala. In western astronomy we have a dolphin as the constellation figure of Delphinus. However, we find in Dolphin 'a natural symbol "at a place where ships can anchor"' (Brown's *Primitive Constellations*, Vol. I, p. 185). Hence it is not improbable that the boat might have been a figure in this constellation. Their cow might be the clouds. Their connection with fire may refer to summer heat. The gouri-cow may be the red cloud. The horse fashioned by the Vasus from the sun seems to be the sun's rays. Their connection with Rudra, Rudras, and Ādityas simply refers to the neighbouring bodies, such as the sign Sagittarius and other collections of stars (considered as Rudras and Ādityas).

The three passages from the Atharvaveda, above referred to, may thus doubtfully be explained: The first passage may refer to the production of a good crop due to the agency of heaven (pouring down rains), earth (on the soil of which the crops grow), Viṣṇu (the giver of heat and light on which depends the growth of crops), and Prajāpati (as the supreme being who makes a good provision by the profuse growth of crops); they are thus all spoken of as 'cows' which are bestowers of milk as food as they are of crops as provision. The top of the *bradhna* (which we take for the sun) probably refers to the position of the asterism Dhanisthā, which is placed at a distance above the ecliptic, the path of the sun. In the third passage Puruṣa (representing Brahman as the Sambatsar—the year) refers to the year, and his birth to the beginning of the year during the rainy season which was connected, as we have seen, with the Vasus.

Lastly, as regards the individual names of the Vasus in the later Sanskrit literature, we may take them as agencies which were considered to be the bestowers of prosperity upon the people. That some of them at least refer to heavenly

bodies is shown by the names of the sun, moon, and probably Āpa (Pūrvāṣāḍhā) and Dhruva (the polar star?). The origin of the idea is perhaps to be traced to the passages in the Rigveda where several deities are qualified as Vasus.

D. Deities connected with entrazodiac constellations.

1. *Pūsan*. The Rigvedic Deity Pūsan has been invoked alone in eight hymns (I. 42; VI. 53-56; 58; X. 26), with Indra in one (VI. 57) and with Soma in another (II. 40). He is also celebrated along with several other deities in general in some fifty-eight hymns or more. He has also been praised in the Atharvaveda.

In Rigveda we find the mention of a few anthropomorphic characters of Pūsan. Thus he has braided hair (VI. 55. 2; IX. 67. 11), and has a beard (X. 26. 7). We have mention of his right hand by means of which he holds a goad (VI. 54. 10). He is besought to trample on the brand of the wicked by his foot (I. 42. 4). He is a visible deity (VI. 56. 4). We see many physical attributes which point to his bodily strength. Thus he is an *asura* (V. 51. 11), strong and swift (V. 43. 9), vigorous (VIII. 4. 15), powerful (I. 1318.) and resistless (VI. 48. 15). He is described as of irritable temper (*ugra*) (VI. 53. 4). He is bright (I. 23. 14; VI. 48. 16; etc.) and called *agohya*; that is, not to be concealed. His food is gruel (VI. 56. 1). He wears cloth woven of wool (X. 26. 6).

We find his weapons mentioned in several hymns. Thus he holds a golden spear (*vāṣi*) (I. 42. 6). He holds a goad (or bridle) in his hand (VI. 53. 1; VI. 58. 2).

He is the best charioteer (V. 56. 2, 3). The wheel of his car is indestructible; the nave of the wheel never wears off and the felly never becomes out of order (VI. 54. 3). He is constantly moving his golden wheel (VI. 56. 3).

Pūsan is closely connected with the goat. He has been called *ājṛ*, that is, provided with a goat (I. 23. 13) and *ājṛṣva* (having a goat instead of a horse) in many places (I. 138. 4; VI. 55. 3, 4; IX. 67. 10; etc.), evidently with reference to his chariot being drawn by goats which is distinctly mentioned in a few places (VI. 55; IX. 26. 8); again goats are called his carriers (VI. 57. 3). He is the lord of glowing he- and she-goats (X. 26. 6). The goat is dedicated to him in the horse-sacrifice (I. 162. 2-4).

In several places we are informed of the abode of Pūsan. He is placed above the mortal world and is equal to other deities in beauty and prosperity (VI. 48. 19). He appears in the heaven-at night towards the morning (VII. 39. 2) and goes away at sunrise (X. 1391.). He knows all the directions (X. 17. 5). His golden boats float on the heavenly ocean and he acts as a messenger of the sun (VI. 58. 3).

Pūsan has been called the lover of his sister (the morning) (VI. 55. 4, 5), the *lord of night* (VI. 55. 5) and, again, the *husband of the heaven and earth which remain together* (X. 17. 6).

Pūsan has been endowed with several functions. First, he is regarded as the lord or guardian of roads (VI. 49. 8; VI. 53. 1). He is implored to remove all sorts of danger from the path (I. 42. 1-3), to protect one in his path (VI. 54. 9), to allow an auspicious path (X. 59. 7) and so forth. Secondly, he is connected with rains and storms. He is invoked for rain (X. 98. 1). He is said to be the bestower of rain (X. 26. 3), to help Indra in the pouring down of rain (VI. 57. 4), and to milk the heaven with Indra and Mitravaruṇa (III. 57. 2). He has been mentioned as a friend of Indra in one place (VI. 56. 2) and as a brother in another hymn (VI. 55. 5). He has been prayed not to uproot the trees, thus indicating his relation to storms (VI. 48. 17). It is perhaps in connection with his rain-giving function that Pūsan has been called 'deliverer' (VIII. 4. 15, 16) and son of deliverance (VI. 55. 1). Thirdly, he is called the protector of cattle (VI. 54. 5, 6. 10; VI. 58. 2; etc.) and perhaps of beasts in general (VI. 53. 9). Fourthly, we have distinct reference to his connection with cultivation. He is invoked to preside over the furrow produced by tilling the ground in a hymn dealing with cultivation (IV. 57). We can easily realize the importance of his second and third functions in relation with the fourth. Fifthly, he has been invoked for his gift of beautiful maidens (IX. 67. 10-12).

We also get the mention of Pūsan as undertaking the ceremony of *varana* in the marriage of the twin-gods Aświns with Sūryā (X. 85. 14). In another hymn (V. 184. 3) we are informed that he swiftly carries Sūryā with the help of the Aświns. Pusan brings the six seasons (?) repeatedly with Indu (I. 23. 15).

I shall now try to identify Pūsan and find out his physical basis.

Following Yāska, who calls him an *Aditya* (Nirukta VII. 9), all Oriental Scholars (as Goldstücker, Roth, and Bothlingk, Wilson, Langlois, Max Müller, Macdonell, etc.) identify Pūsan with the sun. Max Müller regards him as the sun as viewed by shepherds. Macdonell finds in him the sun manifested chiefly as a pastoral deity.

Although this idea has come down from Yāska and is universally accepted by Orientalists, I do not agree with them and hold a different view altogether.

There is great difficulty in regarding Pūsan as the solar-deity from the fact that he is called a messenger of the sun and he appears in the heaven at night. Hence he cannot be our sun and must be something else.

We find that Pūsan, among his various attributes, has

been bestowed with several features which are peculiar to him. Thus he is called the best charioteer: he holds a goad or bridle in his hand; he is variously connected with glowing goats; and he is himself bright. These characters are quite sufficient to lead us to the view that Pūṣan is nothing but the constellation named Auriga of the Northern Hemisphere.

The constellation Auriga is also known from ancient times as a charioteer or Wagoner. The plan of the constellation, as it has been handed down to us, is now drawn in two ways:—(1) It is represented as a charioteer kneeling in his vehicle and often with a kid on his left shoulder (*Century Dictionary*), or (2) it is shown 'as an old man in a more or less sitting posture with a goat and her kids in his left hand and a bridle in his right' (*Encyclopædia Britannica*, 14th edition, article 'Auriga': figure in the article 'Constellation'). We find a whip in place of a bridle in Johnston's celestial globe. Again coming to the derivation of the term 'Auriga' we see that it has been derived from *aurea*, bridle (*Century Dictionary*). Further the principal star α Aurigae or Capella of the constellation has from ancient times been regarded as the storm-goat. 'The two stars ζ and η in the arm of Auriga were regarded by mariners of yore as affording presages of the weather; and they were so much dreaded, that they are said to have closed navigation at their rising. Hence, in an Epigram of the *Anthologia*, Callimachus says:

Tempt not the winds, forewarned of dangers nigh,

When the kids glitter in the western sky.' (Smyth and Chamber's *Cycle of Celestial Objects*, p. 129).

We find a parallelism of Pūṣan in the Achaian Storm-god Akethorr (Thonthe—Charioteer) whose car is drawn by two storm-goats. (See *Primitive Constellations* by R. Brown, Vol. I, p. 219.)

The Arabs named him the 'Guardian of Pleiades' and the Pleiades were regarded as the seven daughters of Atlas in Greek Mythology. (*The Constellations and their History*, by Rev. C. Whyte, pp. 106, 155.) We thus see why he was invoked as the giver of maidens.

There is sufficient evidence to show that the constellation figures, charioteer and the goat, were recognized by the Babylonians and Chaldaeans. (See R. Brown.)

The heavenly ocean referred to above is undoubtedly the milky way in which the constellation is situated. The glowing boats are no doubt the bright stars shining in the milky way. Pūṣan's lordship of the paths perhaps indicates the determination of the direction at night from his position in the sky.

Lastly, we may attempt roughly to determine the time referred to by the hymns sung in praise of Pūṣan. We have seen that he is closely connected with rains and storms and we are told that he used to appear in the heaven at night towards

morning with the Aswins (α and β Arietes) and to go away before sunrise. From these facts we may infer that the vernal equinox was at that time somewhere near the Pleiades, and that when the sun used to rise in the heaven after the summer solstice and towards the autumnal equinox in the rainy season the Auriga used to appear at night in the west with the Aswins and set just before the morning on the western horizon. This used to happen somewhat between 1200 to 1500 B.C.

2. *Prajāpati*. The name occurs some five times in the Rigveda. In one (X. 169. 4) the sage Prajāpati seems to have been meant. In another place the sun was qualified as *prajāpati* (that is, lord of living beings) (IV. 53. 2). In the remaining places he has been invoked as a distinct deity, either simply with others (IX. 5, 9) or for progeny (X. 85. 4) or for efficient semen for conception (X. 184. 1). Thus he has been considered as the bestower of good progeny only.

Coming to the White Yajurveda, we find him mentioned some twenty times. He has been offered oblations some ten times. Elsewhere he has been prayed for strong male impregnat and vigorous son, who may himself be a father (8. 10). He has also been invoked for guarding treasure (8. 17) and for coming on the surface of the earth (13. 17, 24). He has been stated to be one than whom there is none more mighty and is said to pervade all existing creatures (8. 36). He is also said to exist in uttered speech (8. 54) and to be the lord of the world (18. 43). Prajāpati has been designated as *ṣoḍaśi* (that is, consisting of sixteen parts) and is said to maintain three great lustres (the sun, the moon, and fire according to the commentators) (32. 5). We are also told that none was born before him and that he created the whole world (32. 5). Again, we are informed of the birth or origin of Prajāpati: he is born from the timely germ laid down by the strong, self-existent first one within the mighty (vast) flood (space) (23. 63). Lastly, he is said to move in the womb, remaining unseen he becomes born (manifests his existence) in various ways. The intelligent (people) discern his origin and in him alone stand all existing (living) creatures (31. 19). Here we find that Prajāpati occupies a very prominent place and the conception of the sphere of his action has been greatly extended as the creator and supporter of the living world.

We find nothing important concerning the deity in the Black Yajurveda.

We have plenty of information regarding this deity in the Atharvaveda. We find him closely connected with generative powers and gift of progeny (VI. 11. 2; VI. 20. 1; XIX. 17. 9; XIX. 18. 9; XIX. 19. 11). He is said to have created all, the highest, middle, and the lowest (XII. 1, 61); he is the lord of creation and protector of all creatures; with a half (of his power) he generated all existence (X. 8, 13); he maintains all

the worlds (X. 7. 7); he fulfils what is deficient on the earth (XII. 1, 61). He has twice been called the first-born of righteousness (IV. 35. 1; XII. 1, 61). He is connected with thunder in several ways: His voice is thunder (IX. 1, 10, 20); he manifests himself to his creatures by thundering in a clear sky (IX. 1, 24). He is again connected with time: Time is the lord of all and was father of Prajāpati (XIX. 53. 8); time was Prajāpati in the beginning and generated progeny (XIX. 53. 10). He is said to have cooked the rice-mess for Brahman (IV. 35. 1); hence he was regarded as distinct and different from Brahman. Again in connection with the release of a house, we are told that the dwelling house was fixed and made by Prajāpati, who also made the forest trees give rise to young plants (IX. 3, 11). In a few hymns we find that Bringer and Gatherer are his two distributors (III. 24. 7), that *Sabhā* and *Samiti* are his two daughters (VII. 13. 1); *Ekāṣṭaka*, the mother of Indra and Soma, is the daughter of Prajāpati (III. 10, 13). Lastly, in a passage connected with shaving (VI. 65. 2) we find it stated that let Aditi shave the beard, let the waters wet (it) with splendour and let Prajāpati nurse it. Here we have a further step in generalisation of the functions of the deity.

We have voluminous references to the term Prajāpati in the Brahmanic literature. Practically all the objects then known or conceived of were called Prajāpati, perhaps from the idea that all their attributes (or their very existence) were due to him, as the creator or sustainer of all. Thus, the fire, sun, wind, moon, earth, and heaven have been designated as Prajāpati; he has distinctly been said to represent 'all the gods'; he has again been identified with *Brahman* and *Ka*; he has been called the 'one' and 'all'; he is the *puruṣa* (supreme being) and is *citpati* (lord of the soul). Again, the year has been designated by the same name. He has again been made to represent the eagle (perhaps the constellation Aquila) and the rays of light (perhaps the stars or planets). He is said to reside in the voice, speech, mind, life, soul, and so forth. He is connected with religious ceremonies and ceremonial articles. Again, many sages, as Vasiṣṭha, Jamadagni, have been regarded as Prajāpati. We further find a large number of epithets assigned to him: He has been called *visvajit* (conquerer of all), *hiranyagarbha* (gold-wombed), *visvakarma* (creator of all), *anirukta* (unspeakable), *amṛta* (immortal), etc. Lastly, we find that Rohiṇī (the star Aldebaran) is the daughter of Prajāpati. The *Visva-devas* are his sons.

We have mention of Prajāpati in the old astronomical works of the Hindus. He is the lord of Rohiṇī (Aldebaran) (Ārcayotiṣa sl. 25; Yājuṣajyotiṣa 32). There is a star of the same name (β Aurigae) mentioned in Soma-siddhānta (4, 6, 11), Brahma-siddhānta (2, 176), Vṛddhavasīṣṭha-siddhānta (8, 11),

and Sūrya-siddhānta (8, 20); he is placed five degrees to the east of Brahmahrdaya (Capella).

It is evident from what we have traced from the Rigvedic times down to the Brahmanic period that there has been a gradual change in, or rather a widening of the sphere of conception of the deity. Beginning with a limited idea as a bestower of good progeny, his sphere of power and benevolence has been modified and greatly widened, and he is ultimately considered as the supreme universal soul, the Brahman. (See Macdonell's *Vedic Mythology*, p. 119.) The bearing of Prajāpati to the celestial bodies as we find in the astronomical works will be discussed below.

There is a strange story about Prajāpati told in the Maitrāyaṇī Samhitā (4. 2, 12) which is also repeated in Aitareya Brāhmaṇa (3, 33), Śatapatha Brāhmaṇa (I. 7. 4. 1), and Tāṇḍya Brāhmaṇa (8. 2, 10). The story seems to have its origin in the Rigveda (1, 71. 5; X. 61. 5-7). The purport of the story runs thus: Prajāpati, becoming passionate of his daughter Ūsas (dawn), followed her. She transformed herself into Rohiṇī (red cow or red deer) whereupon Prajāpati changed himself into a similar beast. 'Rudra (Mrgavyadha) incensed at this aimed his arrow at him, whereupon Prajāpati promised to make him lord of beasts if he did not shoot? Let us now see what we have actually in the Rigveda.

The first passage (1, 71. 5) from the Rigveda is rather obscure. Taking *Ka* to represent Prajāpati (as we find in X. 121. 10) and not '*karoti*' as done by Sāyaṇa, we translate it thus: when *Ka*, sticking to the great (vast) father Heaven, comes down, the archer throws the brilliant arrow at him by force. The Deva (that is, *Ka*) deposits his vigour in his daughter. The three remaining passages run thus: (Speaking of Visvadeva) He, whose works of splendour performed by impulse were renowned, dispelled for man; what the active one threw to his daughter, grows again (X. 61. 8). In the act done by the Father by passion with the young woman near the middle (region), they paired and discharged *retas* (germinal fluid) into the high (sacred?) abode (*ycni*) of good-workers (performers of religious ceremonies) (X. 61. 6). When the Father paired with his daughter, he came in contact with the earth and discharged the semen. The good-working (that is, performer of religious ceremonies) Devas created Brahman, the Vāstuspati, the preserver of Vratas (religious vows) (X. 61. 7).

In interpreting the real significance of the story, we shall first consider these three passages. We find in the Rigveda that Prajāpati is connected with the granting of good progeny. Knowing that the greatest percentage of conception occurs in the spring, this season may rightly be taken to be the period of the benevolent act on the part of Prajāpati. The vernal

equinox is connected with the beginning of the spring. As this point used to be calculated as the beginning or end of a year in the Vedic times and, as Prajāpati is connected with the time in the Atharvaveda and is identified with the year (*sambatsara*) in the Brāhmanas, we may find some reason why Prajāpati is considered as the bestower of good progeny. As already noted, *Ka* is Prajāpati and Father is the same deity. His daughter is Dawn (as interpreted in Maitrāyaṇī Samhitā and other later works). The archer is Mrgavyadha (identified as one of the Rudras and with the brilliant star Sirius). Taking the physical basis of these, we may reasonably believe that Prajāpati, for his physical basis, must be some celestial object (constellation figure). We have some other evidences for the same. Thus, he is said to maintain three lustres, which the commentators hold as the sun, moon, and fire. As such an idea does not seem to be consistent, we take them as three brilliant stars. Again, we find in Śatapatha Brāhmaṇa (2. 1, 2, 8) that Mrgasiras (the star λ Orionis) lies in the head of Prajāpati. As the same star lies on the head of the ancient constellation Orion, we may conclude that Prajāpati was more or less coincident with the same constellation.¹ The name of λ Orionis, signifying the head of a deer may make us think that the actual configuration, at least at a later period, was that of a deer (*r̥ṣi*), as we find in the later modified version of the story. When the vernal equinoctial point was situated above or near Orion, the constellation used to appear in the dawn and close to the horizon at the beginning of the spring. We can thus explain the pairing of Prajāpati with his daughter and coming in contact with the earth. The discharge of the small quantity of germinal fluid is metaphorically the light showers of rain not uncommon at this time of the day. In the Atharvaveda Prajāpati is connected with thunder. In the later version of the myth, as told in Maitrāyaṇī Samhitā and Brāhmanas, Dawn is made to transform into Rohiṇī (the brilliant star Aldebaran). This can also be explained when we remember that the vernal equinoctial point moved back towards the beginning of the sign Taurus and came to be placed close to the star Aldebaran at a later period. As regards the archer, who is identified with the dog-star Sirius, placed in the constellation Canis major, we have no distinct evidence regarding its constellation figure, as the name implies. The star is placed in such a position that it is in the same line with the three brilliant stars of the belt of Orion. These three may represent the arrow thrown by the archer.

In the astronomical works, we have the name of a star, viz. Prajāpati which is identical with β Aurigae. This star

¹ In Homer's *Odyssey* (XI. 310) Orion has been described as the Goodliest of men and he is said to be loved by Dawn.

is placed at a great distance from Orion on the northern side of the ecliptic. It is placed near another star called Brahmahrdaya (Capella). In Ramāyana (6. 4, 48) we have mention of a *Brāhmarāśi* as sacred. Perhaps, when the idea of the sages changed at a later period and Prajāpati was identified with Brahman, the constellation figure was also changed and made to embrace these stars. This is the only explanation that I can offer for the star β Aurigae being called Prajāpati and Capella as Brahmahrdaya.

Lastly, the origin of the name of the sign Mithuna may have something to do with the union of Prajāpati with Dawn.

The time of the origin of the myth may be roughly dated at about 4200 B.C. and the later modification at about 3500 B.C.

3. *Maruts*. The Maruts are invoked in thirty-three complete hymns and in most of the passages of two other hymns. They are invoked with Indra in one hymn, although they are associated with him in various ways. They are also addressed with Agni in three hymns and with Vāyu in three passages of a hymn. Lastly, they are praised or otherwise mentioned in more than 150 places alone or with other deities.

The Maruts are 3×7 (I. 133. 6), 7×7 (V. 52. 17) or 9×7 or 63 (VII. 96. 8). They are numerous, although they have the same name (VIII. 20. 13). They remain in a group (*ganaśriyaḥ*) (I. 64. 9; V. 60. 8), being associated together (I. 168. 4). They have the same form (I. 168. 9), are of the same age (I. 165. 1; V. 58. 5), none being eldest or youngest (V. 59. 6) and equally become pleasant (I. 186. 8) or enraged (II. 34. 5; VIII. 20. 2, etc.). They are called leaders in many passages (I. 39. 3; I. 64. 4; V. 54. 10; etc.).

The Maruts are visible (I. 64. 19) and are high in position (I. 64. 2; V. 52. 13; etc.). We have mention of their firm body (I. 64. 3), with head and fire-like tongue (I. 44. 14; I. 166. 11), shoulder (VII. 56. 13; etc.), strong arm (V. 57. 6; VIII. 20. 12), firm hand (I. 37. 3; I. 38. 11), and leg (V. 54. 11). The most characteristic bodily feature of the Maruts is their brilliancy, which is referred to in many passages by different epithets. They are brilliant (I. 19. 3, 5, 6; I. 37. 4; V. 52. 6; V. 57. 5; VII. 56. 16; etc.), self-brilliant (I. 37. 2; VI. 48. 12), brilliant like lightening (I. 172. 1), fire (VI. 662) and the sun (I. 64. 2). They are moon-like (V. 57. 8) and golden in colour (I. 165. 12). They are surrounded by rays of light (I. 19. 8; V. 52. 9). Again they are dark and ruddy (V. 57. 4), probably referring to the darkness due to cloud (or night) and brightness due to lightening (or day). They are spotted (I. 165. 13; II. 34. 11; VIII. 7, 7) like a deer (I. 64. 8). Their close connection with lightening will be referred to later when I consider their works. Of other physical features of the Maruts, we know of their fearful appearance (I. 19. 5; I. 64. 2; I. 169. 7; V. 56. 2), youthfulness (I. 64. 2; etc.), great strength (I. 19. 5;

I. 37. 7 ; I. 64. 9 ; I. 186. 8 ; V. 5, 6. 3 ; etc.), and their movements, which will be dealt with in connection with their works. Several personal traits of the Maruts are also known to us. They are pleasant (V. 54. 12), free from malice (I. 19. 3), and attractive to all (III. 26. 5) ; but at the same time they are irritable (I. 19. 4 ; I. 94. 12 ; VI. 66. 6 ; VII. 56. 7 ; etc.). They are playful (I. 37. 1, 5 ; V. 60. 3). They are unconquerable (I. 19. 4) and unobstructive (I. 6. 8 ; I. 186. 8). They are roarers (I. 37. 10 ; I. 166. 1 ; VIII. 7. 3 ; VIII. 7. 7 ; etc.), like a lion (I. 64. 8 ; III. 26. 5) and give rise to shaking or trembling (I. 37. 6 ; V. 54. 4 ; V. 87. 1 ; VI. 48. 20 ; VIII. 20. 14, 16). These latter characters are no doubt referable to thunderstorm closely connected with their works. They are called iron-tusked boars (I. 88. 5).

Two other characteristic features of the Maruts are their ornaments (decorations) and implements, which are unparalleled in their variety by those of other Rigvedic deities. They have decorative salves or markings on the body (añji) (I. 85. 3 ; I. 19. 2 ; V. 53. 4 ; VIII. 20. 11 ; etc.) of ruddy colour (II. 34. 16), garland round the neck (V. 53. 4), golden ornament on the breast (I. 64. 4 ; II. 34. 8 ; V. 53. 3, 4 ; V. 53. 3 ; VII. 56. 13 ; VIII. 20. 10, 22 ; X. 78. 2), turban on the head (VIII. 7. 25), golden (V. 57. 6) and shaped like the two horns of a cow (V. 59. 3) and have a bracelet round the hand, armlet round the arm (I. 66. 9 ; V. 58. 2), and anklet round the leg (V. 54. 11). Of their implements, the weapons in general are mentioned (I. 39. 2 ; VII. 56. 13 ; etc.). There is also mention of stone implement (I. 172. 2 ; V. 54. 3). Of special weapons, we have bow and arrows (I. 64. 10 ; V. 57. 2), thunderbolt (V. 54. 3 ; VIII. 7. 22) mentioned as held in the hand, axe (vāśī) (I. 19. 2 ; V. 53. 4 ; etc.) of gold (VIII. 7. 32) and javelin (I. 37. 2 ; V. 60. 3 ; V. 57. 1 ; etc.). The javelin is bright (I. 31. 1 ; I. 64. 11 ; I. 85. 4 ; I. 168. 4 ; II. 34. 5 ; V. 55. 1 ; VI. 66. 11 ; etc.), is carried on the shoulder (I. 64. 4 ; V. 54. 11 ; V. 57. 6), and is thrown by them (V. 52. 6). They are called brilliant from javelin or as associated with lightening as javelin (ṛṣti-vidyuta) (I. 168. 5 ; V. 52. 13). There is also mention of a toothed weapon (I. 166. 6) and of a golden armour (V. 55. 6).

The Maruts' cars are golden (V. 57. 1 ; VIII. 20. 8) with golden wheels or fellies (I. 64. 11 ; I. 88. 5). The lightenings are as if the cars of the Maruts (III. 54. 13). Their cars run over the clouds (VIII. 7. 18) and are connected with clouds from which rain goes down (I. 87. 2). There are a bow and other weapons on their cars (VIII. 10, 12). Their cars are visible during rain (V. 53. 5). In one passage (VI. 66. 7) their cars are said to be without a charioteer, without steeds, and to be givers of rain. Their cars are drawn by female steeds which are spotted (I. 19. 2 ; I. 89. 7 ; II. 34. 3, 4 ; III. 16. 6 ; VIII. 7. 28 ; etc.), golden footed (VIII. 7. 26), and are brown and ruddy in colour (I. 88. 2 ; VIII. 7. 28 ; etc.). Their cars are also said

to be drawn by *niyut* horse (usually regarded as Vāyu's steed), *aruṣin* (usually taken as the sun's steed), and *hari* (the steed of Indra) (V. 52. 11; V. 54. 8; V. 56. 7). Once (V. 58. 1) the Maruts are said to have yoked the winds as steeds to their pole. Lastly, we find mention of rein and whip (I. 37. 3; I. 38. 12).

The Maruts are the sons of Rudra (I. 114. 6, 9; II. 33. 1; V. 52. 16; etc.). They are also regarded as the followers of Rudra (I. 122. 1). Their mother is spotted (*pr̥ṣṇī*) (I. 38. 4; I. 89. 7; V. 52. 16; V. 60. 5; VIII. 7. 3; etc.). They are again said to have a cow as their mother (I. 85. 3) or friend (VIII. 20. 8). Their mother is *Rodasī* (I. 167. 5, 6; V. 61; 12). *Rodasī* is Rudra's wife (V. 56. 9).

The Maruts are associated with several deities in their works. They are closely connected with Indra (I. 101. 8; I. 169. 1; etc.), who is their brother (I. 170. 2), friend (III. 51. 8, 9), and helper (III. 35. 9; I. 168. 7). They are the followers of Indra (V. 57. 1) and appear with Indra (V. 87. 2). They are also connected in their works with Varuṇa (VIII. 81. 1), Viṣṇu (VII. 3, 21), and Vāyu (VIII. 7. 4). Lastly, Agni is a great favourite of the Maruts (VIII. 103. 14) and they are dependent upon Agni (III. 26. 5).

Coming to the consideration of their abodes, we find them invoked to come from the heaven (V. 53. 3; etc.). They live in the same place (I. 165. 1; VII. 56. 1). Their residence is luminous (I. 19. 6; I. 161. 14; V. 52. 5; etc.). They are said to remain in the highest place (V. 87. 9) and travel in the highest region of the heaven (V. 59. 7; VIII. 7. 7). Again, they are said to live in the upper, middle, and lower region of the heaven (V. 60. 6), or between the heaven and earth (sky?) (I. 122. 1; I. 38. 2). Once (V. 52. 9), they are said to reside in the *Paruṣṇī* river.

We are told something of the birth and origin of the Maruts. They are said to have been born in the heaven (I. 64. 2, 4), Rudra gave birth to them in the womb of *Pr̥ṣṇī* (II. 34. 2). Their birth-place is fixed; they come out of their mother (I. 37. 9). Again, they are said to arise from lightening (I. 23. 12); Vāyu is said to have generated the Maruts for rain and for giving rise to rivers (I. 134. 4); but elsewhere (I. 64. 5) Maruts are said to have generated Vāyus and lightening. The Maruts were born together at the same time (V. 55. 3; V. 58. 5), and were born for pouring down water (V. 61. 14).

The characteristic works of the Maruts are exhibited in the pouring down of rain with accompanying thunder and storm. Firstly, they are said to send clouds, full of water (V. 56. 4), to make the clouds move (I. 19. 7; V. 54. 4), cleave the clouds (V. 54. 5; V. 52. 9; VII. 56. 17; etc.). The clouds are often referred to as a 'cow' (II. 34. 5; etc.). They are said to milk the watery place of the movable (clouds) (I. 64. 11).

They are also said to disperse the darkness (I. 86. 10), or conversely, they are said to cause darkness during the day by clouds (I. 37. 9). Indra urged them to kill the demon Kṛṣṇa (VIII. 96. 14). Secondly, the downpour of rain is attributed to them: Various epithets are assigned to them in this connection (*vṛṣan*, I. 169. 3; II. 33. 13; V. 52. 3; VII. 58. 1; VIII. 20. 12; *vṛṣṇa*, VIII. 20. 9; VIII. 7. 23; *ukṣamat*, VI. 66. 4; I. 64. 2; I. 168. 2; etc.). They make the rain fall on the ground (V. 54. 2) from above (V. 55. 5), and soak the ground (I. 37. 9; I. 64. 5; etc.). They hide the eyes of the sun (V. 59. 5). They milk the watery place of the *pr̥ṣni* (II. 34. 10) or the heaven (I. 64. 5). The rain follows their path (I. 85. 3). They make the rivers flow (V. 53. 7; X. 78. 6), and the seas roll (I. 19. 7, 8), soak the herbs with water (VIII. 7, 22), and know the medicinal herbs (VIII. 20, 25, 26). Thirdly, they are closely associated with lightening and thunder. They originate lightening and wind (I. 64. 5). They remain with lightening (V. 54. 2). The lightening follows them (I. 37. 8; V. 52. 6). When they give rise to rain, the lightenings make their appearance (I. 168. 8). The roaring of Maruts, which we have already discussed above, indicates thunder. Their roaring makes the high mountains shake (V. 60. 3) and makes the people tremble with fear (I. 38. 10). They roar when they desire to pour forth rain (V. 54. 12). Fourthly, the storm is indicated by their movements. We have indications of violent storm in the Rigveda. The Maruts ascend to high places while roaring (VIII. 7, 17). They spread all round as they move (I. 37. 10). Their movements are fierce (I. 37. 7) and unobstructible (I. 64. 3). Their movements are rhythmic (V. 52. 3; V. 52. 8) and slow (I. 85. 6). They travel through night (V. 52. 3). Their movements cause the earth to tremble with fear (I. 37. 8; V. 60. 2), dislodge fixed objects (I. 64. 3, 11), uproot the trees in the forest (I. 39. 5; I. 64. 12; V. 58. 6; etc.) like an elephant (I. 64. 7), and dislodge the mountains (I. 85. 4; V. 54. 1). They throw dust all round (I. 64. 12).

There are other minor works of the Maruts. They are destroyers of heat (V. 54. 1). As spoken in the case of several other deities, they are said to have placed the sun and the heaven and earth in their places (VIII. 7, 22). They have also fashioned the luminous path for the sun (VIII. 7, 8). They are said to hold three luminous bodies in heaven (V. 29. 1). The Maruts preserve the strength of Trita (VIII. 7, 24) who roars at the time of rain (V. 54. 2). They killed the enemy of Trita (II. 34. 10).

There is one benevolent deed on the part of the Maruts. This is depicted in several passages (I. 85. 10, 11; I. 88. 4; V. 52. 12; V. 57. 1). When Gotama became thirsty, the Maruts prepared a fountain for him in the heavens and gave him water to drink. This deed is also assigned to the Aśvins (I. 116. 9).

The Maruts have been requested to drink Soma in many passages of the ninth book. They have also been praised for a son fashioned by Vibhva, the middle one of the three Ribhus.

The Maruts are mentioned in most of the Brāhmanas. They are mentioned as seven in number (Śatapatha V. 5. 1, 12; 5. 4. 3, 17; Taitt. I. 6. 2, 3; etc.) or 7×7 (Yajurveda 17, 80-85; 39. 7; Śatapatha. 9. 3. 1, 28). They are regarded as the leaders of the gods (Tāṇḍya 14. 12. 9; 21. 14. 3; Taitt. 2, 7, 10. 1) and their courtesans (Śatapatha. 2, 5. 1, 12; etc.; Aitareya I. 9; Tāṇḍya 6. 10. 10). They are associated with water (Kaus. 5, 8; Gopatha Uttar. 1. 22).

Taking into account the work of the Maruts, connected with lightning, thunder, rain, and storm, they are taken to represent the storm-gods. Plunket, in his *Ancient Calendars and Constellations*, pp. 173-4, consider the Maruts to represent the number of days that used to elapse between the crescent half-moon, blazing on the brow of Rudra and the full-moon of the summer solstice at about 4000 B.C. or earlier. But a difficulty arises when we find the Maruts as born together at the same time, and working together. Although the same traits are more or less applicable to Indra with whom they are closely associated in their works, a striking difference is discernible between the nature of Indra and of the Maruts. In no deity of the Rigveda do we find such a detailed account of anthropomorphic characteristics, including decoration, ornaments, and weapons, as we get in the case of the Maruts. This leads one to the idea of some constellation figures representing these deities. Further, their birth from a spotted mother (which we take to represent the heaven studded with stars), their abode in the heaven, the brightness of their ornaments, decorations and weapons, and their spotted steeds all go to confirm the same view. But we are unable to advance further than this, as we have no materials for finding out which constellation figures they actually represent. It is quite possible that they might have represented a number of small figures comprising some brilliant stars in the neighbourhood of the sign Sagittarius, which we have already taken to represent the god Rudra. The river Paruṣṇī perhaps represents the milky way lying near by. The association with Indra shows that the summer solstice was placed close to them. We can easily interpret all the works which are common to both the Maruts and Indra.

4. *Vṛṣākapi*. This term occurs several times in X. 86. He is Indra's favourite (X. 86. 1, 12). He is foremost in stoutness (X. 86. 1) and is a tawny beast (X. 86. 3). He has been considered as very destructive and a desire is expressed to behead him (X. 86. 5). He is said to have been beaten by a dog chasing a boar (X. 86. 4). When Indra and Vṛṣākāpi climb up, the evil-doing beast disappears (X. 86. 22). It has been prayed that Vṛṣākāpi may receive a dagger, belt, and a cart load

(X. 86. 18). Lastly, his wife is mentioned and her bull was to be partaken of by Indra (X. 86. 13). In Gopatha Brāhmaṇa (Second part, 5. 19), he is regarded as an āditya.

The term 'Vṛṣākapi' has been shown by Hornell to be a Dravidian word signifying 'male ape'. But considering the above characteristics depicted in the Rigveda, we are inclined to take him to represent the constellation Orion. The dog biting his ear is the star Sirius in the constellation Canis Major. The boar chased by the dog is the constellation Lepus. Lepus is ever chased by Sirius (see Brown's *Primitive Constellations*, Vol. I, p. 97).

VII. ATMOSPHERIC OBJECTS.

1. *Vāyu and Vāta.*

Vāyu is invoked in three complete hymns and parts of eight others. Vāta is celebrated in two short hymns. They are, in addition, praised or otherwise mentioned in some hundred and fifty passages. Their names sometimes occur together in the same passages (VI. 50. 12; X. 90. 13; etc.). Vāyu has also been invoked with Indra in one complete hymn, in several passages of another hymn, and in some fourteen scattered passages. He has also been praised with Agni, Sūrya, Asvins, Viṣṇu, Maruts, and some other deities. Vāta is associated with Parjanya.

Vāyu has usually been addressed as a single person, but in one passage (II. 11, 14) there is mention of many Vāyus. The word Vāta has been used in the singular, the dual (*vātau*) (X. 137. 2) and many times in the plural (*Vātāḥ*).

Vāyu is regarded as the chief of the gods (VIII. 26. 25). He is the son-in-law of Tvaṣṭr (VIII. 26. 21). Vāta is regarded as the messenger of the gods (X. 137. 3).

Vāyu is visible (I. 2. 1) and white in colour (VII. 91. 3). Vāta is regarded as widespread (X. 89. 11); he is recognised by his movement as his form is not visible (X. 168. 8). Of other physical features, we find that Vāyu is not still (X. 168. 3), he is always moving (II. 11. 3), and is swift (X. 106. 7). This movement is specially connected with Vāta in many passages. The swiftness of Vāta has been used many times as a standard of comparison for the motion of many objects (V. 31. 10; VII. 36. 3; VIII. 1. 11; etc.). Vāta is said to blow (I. 28. 6; X. 137. 3) during rain (V. 83. 4). He is also said to move to and fro (IX. 97. 52). He travels in the sky (II. 38. 2) and comes from the sky (I. 161. 14). He blows downwards (X. 60. 11). He has been requested to blow without heat (VIII. 18. 9) and not to blow unfavourably (I. 29. 6). He cannot be held fast (X. 95. 2). The strength of Agni is compared with that of Vāyu (VI. 4. 5). Vāta is said to roar in the sky (IV 22. 4) as thunder (X. 168. 1). We know Vāyu's wrath (VII. 62. 4).

Vāyu has a chariot (VII. 90. 1). The chariots are one hundred in number (II. 41. 1). The chariot is golden-fellied (IV. 46. 4). Indra is the charioteer of Vāyu (IV. 46. 2; IV. 48. 2). The steeds of Vāyu's chariot are known as *Niyut* (I. 134. 2; II. 41. 1; III. 35. 1; IV. 46. 2; VII. 23. 4; etc.), perhaps referring to their great number. They are said to be ninety-nine (IV. 48. 4), a hundred (IV. 48. 5; VII. 92. 5), a thousand (I. 135. 1; IV. 48. 5; VII. 92. 1; etc.) or ten thousand (I. 135. 3)

in number. Again, Vāyu's chariot is drawn by a pair of red or ruddy horses (I. 134. 3). Vāyu's steeds are strong (I. 134. 1; I. 135. 9), stout like a bull (I. 135. 9), swift (I. 135. 9) like mind (IV. 48. 4), and have wide flanks (VIII. 26. 23). They carry Vāyu between the heaven and earth (I. 135. 9).

As regards Vāyu's origin, we are told that Rodaśi generated him for wealth (VII. 90. 3). Again he is said to have arisen from the life (*prāṇa*—vital force) of *Puruṣa* (Divine Being) (X. 90. 93). Maruts, again, gave origin to the Vātas (I. 64. 5).

Vāyu and Vāta are connected with several deities in relation with their works. Vāyu is connected with the Maruts. He has originated the Maruts for the production of rain and rivers (I. 134. 4). Vāyu travels with the Maruts (VIII. 7. 4) and the Maruts go up with the help of Vāyu (VIII. 7. 3). Dawns spread the light for Vāyu (I. 134. 4). The Asvins drink Soma at the end of the day with Vāyu and Niyut (III. 58. 7). The heaven and earth follow Vāyu (IV. 48. 3). Agni is made to appear by Vāyu (V. 19. 5). But Vāta is more intimately associated with Agni; and this association is depicted in various ways. Agni runs along the path of Vāta (II. 14. 3; V. 5. 7). Vāta remains round the fire (X. 115. 4). Vāta blows towards the flame (I. 148. 4). Agni unites with the force of Vāta (IV. 7. 11). Vāta is also connected with Varuna (VII. 87. 2). Varuna knows the path of Vāta (I. 25. 9).

We now come to the works of Vāyu and Vāta. The clouds are made to go up by the Vāyus (VIII. 7. 3). Vāta, again, is sent by the roaring clouds (IV. 17. 12). Vāta spreads the cloud (I. 116. 1). Vāyu is the friend of water (X. 168. 3). Vāta is the downpourer of rain (I. 122. 3; VII. 40. 6) and is the soul of the world in this respect (VII. 87. 2). He agitates the water by his force and separates the weeds from the water in a pool (X. 168. 5). Vāta makes the forest tremble (V. 78. 8; X. 23. 4) and shakes the fixed objects (X. 168. 2). He breaks down the trees as he comes (X. 168. 1).

We are also informed of something more about them. Vāyu dries everything (VI. 37. 3). Vāta remains in our body as the soul (I. 34. 7). Vāta is regarded as a medicinal agent for the living world (X. 137. 3). Vāta has been addressed for bringing nectar from his storehouse (X. 186. 1), for bringing medicine (I. 89. 4; X. 137. 3), for prolongation of life (X. 186. 1), and for protection from the disturbances of the sky (X. 158. 1). He has also been invoked for fanning the cows (X. 169. 1). Deadman's breath is said to come to Vāyu (X. 16. 3).

We have numerous references to Vāyu in the *Brāhmaṇas*. Vāyu is regarded as the presiding deity of *Svāti* (one of the lunar asterisms) in the ancient astronomical treatises.

It is quite evident that Vāyu is a personification of wind, particularly in connection with rain and thunder. Vāta represents the functional principle (element) of wind.

2. *Dāsas and Asuras killed by Indra.*

Scattered through the Rigveda are found a large number of names, occurring from once to many times, many of which are qualified as *dāsas*. I propose dealing with them here in alphabetical order.

(1) *Atka*. This name occurs once only (X. 49. 3); and we are told that Indra killed *Atka* for the benefit of Kavi by beating him. The word also occurs elsewhere (I. 122. 2; V. 55. 6; V. 74. 5), where it is used for a garment, cloth or covering. In Naighantu, the meaning of the word is given as a flash of lightening. The name Kavi may perhaps refer to Bhṛgu's son, the author of IX. 47-9 and 75-9. We are inclined to believe that the demon is here a personification of the cloud, thought of as envelope of the rain-water, or, following the meaning given in Naighantu, the deity of lightening.

(2) *Anarśani*. The name occurs once only (VIII. 32. 2). We are informed that Indra, having made the waters flow, killed *Anarśani*, *Piprudāsa*, and *Ahiśuva*. The word *anarśani* may be derived from *na*, not, and *arśani* from the root *ṛṣ*, to break, to make to flow (as *arśa*, hæmorrhoid) and thus to mean that which does not cause to flow; or conversely, that which stops the flow. Hence we are led to conclude that *Anarśani* may be the deity presiding over drought. Whether the term imports the same idea as *śuśṇa* or not will be discussed in connection with the latter. Following Johansson, Macdonell believes it to preserve 'a historical reminiscence of a prominent terrestrial' foe (*Vedic Mythology*, p. 162).

(3) *Arbuda*. The term occurs seven times. In one place (X. 67. 12) *Arbuda* is said to be possessed of a large collection of water. Indra beheaded *Arbuda* with the help of Brhaspati (X. 67. 12). We are also told that Indra strengthened by Trita, killed *Arbuda* (II. 11. 20) and that he killed *Arbuda* with his face looking down (V. 14. 4). We are further informed that he attacked *Arbuda* with his feet (I. 51. 6) and pierced him with cold (ice) (VIII. 32. 26). Lastly, we see that Indra killed *Vṛtra* with his big bow, killed the deceitful *Arbuda* and *Mrgaya*, and drove out the cows from the mountain (VIII. 3. 19).

The term *arbuda* occurs in the Ganapāṭha of Pāṇini. Yāska gives two meanings of *arbuda*—cloud (3. 10. 1), and an embryo, fortnight old (14. 6). According to Roth (his Wörterbuch) the term also means snake, or a snake-like swelling. Macdonell (*Vedic Mythology*, p. 161) places *Arbuda* in the same category as *Vṛtra*. Considering that *Arbuda* is possessed of a large mass of water and following Yaska's explanation of the term, we may take it as the personification of cloud. Further, the piercing of *Arbuda* with ice (if we can take *hima* to mean ice) evidently points to the formation of ice on the top of the mountains upon which the clouds impinge, and the driving out

of cows from the mountain may either simply refer to cows or figuratively to small collections of clouds on the mountain sides. Indra's bow is the rainbow. It is beyond doubt that the phenomenon depicted in some of the passages at least refers to what actually occurs in the higher altitudes. Large masses of ice accumulate on the top of the mountains above the snow line in the winter. As the temperature of the atmosphere rises on the advent of the summer, the ice sheets begin to melt and clouds are also formed on the top of the mountains in close proximity to the snow. The setting free of rains from the accumulation of water-vapour in the form of the above-mentioned clouds on the top of mountains completes the picture. Hence we may take *Arbuda* as mountain clouds which adhere in large masses to mountain peaks and flanks about the snow line.

(4) *Aśna*. The word occurs seven times in the Rigveda. In two passages we are told that Indra killed *Aśna* with ease (II. 14. 5) and destroyed his residence, after having made the dawn disappear by the sun (II. 20. 5). In another place (VI. 4. 3) Agni is said to have destroyed the dwelling of *Aśna*. In three other places (I. 164. 1 ; I. 173. 2 ; X. 27. 15), the term is applied to Indra as the 'consumer' of the offerings; in another (VIII. 2. 2) it means the stone (which was used to grind the Soma plant to extract the juice). The term occurs in Nirukta (2. 21. 2) as a synonym of the cloud. Taking into consideration that *Aśna* is killed and his residence is destroyed at sunrise by Agni (celestial fire, the sun), and Yaska's explanation of the term, we are inclined to believe that *Aśna* represents the 'morning fog'. As soon as the sun rises and the temperature of the atmosphere becomes higher, the minute water particles of the fog evaporate and the fog clears away.

— (5) *Ahi*. The term occurs more than fifty times. Whereas it is principally used for a distinct personality as *Ahi*, it is also used to qualify *Vṛtra* in five places (I. 32. 5, 8, 11 ; I. 51. 4 ; I. 80. 13). Leaving aside these latter passages for the present, I shall study the characteristics of *Ahi* as noted in the others.

Ahi has been variously described as obstructing or covering the waters (I. 51. 4 ; II. 11. 2 ; II. 19. 2 ; III. 32. 11 ; V. 30. 6 ; VI. 72. 3 ; VII. 21. 3 ; X. 111. 9), lying in water (II. 11. 5) or lying in a watery region (IV. 17. 7). He has also been called a roarer (VI. 10. 10). He has been mentioned as remaining in a lying posture (I. 100. 7 ; II. 12. 11 ; V. 30. 6 ; V. 32. 2) and as sleeping in a recumbent posture (IV. 19. 3). *Ahi* has also been described as discontented, spread out, unintelligible, not possessed of life, lying in recumbent position, unjointed, and of creeping habit (IV. 19. 3). He is said to have caused the appearance of lightening, the roaring of the cloud or the pouring down of rain, and to have thrown a bolt against Indra (I. 32. 13). *Ahi* lives in a cave, remains concealed, incapable of

really represents some cow-like wild beast (as gomrga or some other such animal), which was killed, perhaps in large numbers, during the rains and storms.

(7) *Ilviśa*. In a single passage (I. 33. 12), we are told that Indra pierced the strength (stronghold) of *Ilviśa*. Yaska (Nirukta 6. 2, 14) takes it to be a synonym of the cloud. We may consider its significance in another way. We may (although doubtfully) derive the word from *ili*, a stout stick of wood, and *viś*, to pervade, to enter into; and make it mean a collection of trees (a small forest) from which stout sticks (weapons) were prepared. In such a case it is quite reasonable to think of the uprooting of trees by storm, as one of the feats of Indra.

(8) *Ibha*, *Tugra*, *Tūtuji*, *Daśamāya*, *Daśoni*, *Vetasu*, and *Smadita*. These names of very obscure import occur in some three passages. We are informed that Indra killed *Tugra* and *Vetasu* (VI. 24. 4), that he placed *Ibha*, *Tugra*, *Tūtuji*, *Daśamāya*, *Daśoni*, and *Vetasu* under the control of Dyotana (VI. 20. 8) and that he placed *Tugra* and *Smadita* under the power of Kutsa (V. 49. 4). We are further told (in many passages) that *Tugra*'s son *Bhujyu* was rescued by the Asvins: I shall discuss this event in another place.

Without any other evidence, we shall have to depend upon the doubtful significance of the names of the demons. *Ibha* means 'elephant' or 'one from whom fear is gone' (*gatabhīta*) (Nirukta 6. 12. 1). Knowing that *Tugrya* (Nirukta 2. 24. 2) or *Tugriya* (Pāṇini) means water or *Tugra*'s descendant, we may take *tugra* to mean snow, ice or cloud. *Tūtuji* means 'hastener' or 'promoter' (Nirukta 3, 9. 15; 6, 20. 1). *Daśamāya* literally means 'one having ten tricks'. *Daśoni* literally means 'one having less than ten'. *Vetasu* can be derived from *Veta*, reed or cane, and *su*, to move, and thus may be made to mean 'one moving the reeds'. *Smadita* means 'one attended by followers'. Again the term *dyotana* has been used in one place (VIII. 29. 2) to qualify Agni and means 'glistening'; hence we may apply the same meaning here and signify it as 'a glistening one' (the sun?). We may now speculate (since we cannot be the least definite in this matter) regarding their physical basis. We may take *ibha* to represent water flowing through the plains, *tugra* the snow on the top and the sides of the mountains melting into water, and *tūtuji* the waters (waterfalls) rapidly flowing down the mountains. *Daśamāya* and *daśoni* might have been meant to represent large stretches of water dividing into many or fewer arms or branches as they flow down the mountains. *Vetasu* was perhaps meant for floods in low marshy places abounding in reeds, etc. Lastly, *smadita* might well have represented glaciers flowing down the mountains, the big floating pieces of ice, boulders, and uprooted trees being its followers.

(9) *Urāṇa*. This term occurs once (II. 4. 4). We are told that Indra killed ninety-nine *urāṇas* showing their arms. Macdonell (*Vedic Mythology*, p. 152) refers to it as a demon named 'ram'. Yāska gives the meaning as 'sheep' (Nirukta 5. 21. 3). We are thus inclined to represent *urāṇa* as the sheep which are killed in large numbers during rain and thunderstorm. We may also take an alternative figurative meaning by representing *urāṇa* as pine or fir trees with spreading branches (arms) and with needle-shaped leaves representing the hairs of *urāṇa* which are uprooted during the rain and storm.

(10) *Aurnavābha*. The word is found in three places. We are told that Indra killed *Aurnavābha* (II. 11. 18; VIII. 32. 26). We also see that Indra's mother said that there were many like *Akṣiṣva*, *Aurnavābh*, who should be saved (VIII. 77. 2). *Aurnavābha* has been translated as the 'spider brood' by Macdonell (*Vedic Mythology*, p. 152). If we take into account the passage in which it is noted that *Aurnavābha* should be saved, we should take it to represent something useful to the people. It may thus mean some woolly beast (as Yak or some other animal like it). It is thus easy to conclude that useful beasts like the present one were killed through the agency of rains and storms.

(11) *Kuyava*. The term occurs about seven times. We are told that Indra killed *Kuyava* (I. 103. 8), that Indra brought *Śuṣṇa* and *Kuyava* under control (VII. 19. 6) for the sage Kutsa (II. 19. 6), and that Indra killed *Kuyava* at the beginning of the day (IV. 16. 12) and broke the wheel of the sun's chariot (IV. 16. 12) or stole the same (VI. 31. 3). We find two passages in which there is mention of *Kuyava*'s two wives. The passages are more or less obscure and we may translate them as follows : (1) The dweller of the atmosphere (that is, *Kuyava*) himself diffuses all round ; he himself dips down and disperses the foam. The two wives of *Kuyava* become bathed in the foam ; may they be killed in the current of the stream (I. 104. 3). (2) The place of origin of *Ayu* placed above is concealed : the powerful (demon) grows from above (the waters) and appears. The straight-flowing (*anjasi*), one flowing in a curved manner (*kuliṣi*), and the wife of the mighty (*virapatni*) having satisfied him with their waters feed him with them (waters) (I. 104. 4).

The oriental authors (Macdonell, *Vedic Mythology*, p. 161) take *kuyava* as qualifying *śuṣṇa*, but I take him to be a distinct and separate demon. Whereas in two passages (II. 19. 6 ; VII. 19. 2) we may take either significance, in the other three (I. 103. 8 ; IV. 16. 12 ; VI. 31. 3) the construction is such that one is inclined to take the latter view. Further, we have mention of *Kuyava*'s wives without the mention of *Śuṣṇa* (I. 104. 3). If we accept the meaning of *Kuyava* as 'causing bad corn or harvest' (as held by Macdonell, p. 161) referring to barley, we find that this demon was destructive to barley, the only or

principal food crop in Rigvedic period. Nowadays barley is and can only be cultivated in the Punjab at higher altitudes and in the winter. It can only be grown in a comparatively dry place with a dry atmosphere; and the Punjab has the lowest rainfall of the Northern India and has very little winter monsoon. We may take it for granted that the physical features of the province has not changed from the Vedic times so greatly as to affect the crop. Taking these facts into consideration, the characteristics of *Kuyava* (I. 104. 3) and the fact that Indra killed *Kuyava* at the beginning of the day, we are led to the idea that *Kuyava* is the personification of 'fog' appearing in the extremely cold winter night and continuing to the morning. As the temperature of the atmosphere becomes 0°C. the fog drops freeze on the surface of vegetation as granular hoar-frost. The vegetation suffers great damage from the freezing of the juice (cell sap). Thus hoar-frost is greatly injurious to the young flowering shoots of the crop (see *Encyclopædia Britannica*, 14th ed., Vol. 9, article 'frost'). Further, if we take the breaking or stealing away of the wheel of the sun's chariot as a figurative representation of the late sunrise in the winter (as well as the obstruction to the sun's rays to reach us by the fog), we have further evidence for our conclusion. That *Kuyava* is different from *Śuṣṇa* is realized when we see that Indra poured down water and filled the wells after killing *Śuṣṇa* and that nothing of this sort is said of *Kuyava*.

We doubtfully consider the two wives as representing the hoar-frost and small pieces of ice floating on the surface of the streams. The two passages (I. 104. 3, 4) probably refer to the idea of the formation of fog from the evaporation of water from the surface of the rivers.

The reference to the sage Kutsa for whom Indra controlled *Kuyava* probably indicates an unusual occasion in the lifetime of Kutsa when there was a conspicuous absence of frosty weather.

(12) *Kuyavāca*. A single passage (I. 174. 9), indicating that Indra killed *Kuyavāca* for the king Duryoni, occurs in a hymn composed by a sage other than those who composed the passages on *kuyava*. It is probably identical with *Kuyava*.

(13) *Kṛṣṇa*. The terms *kṛṣṇa* and *kr̥ṣṇā* occur many times in the Rigveda. Except in some seven rks, they have been used to mean darkness (I. 92. 5; I. 115. 5; IX. 66. 24; X. 89. 2; etc.), dark night (I. 113. 2; III. 55. 11; VI. 9. 1; X. 3. 2; etc.), charring due to burn (IV. 7. 9; VI. 60. 10; VII. 3. 2; X. 20. 9; etc.), the smoky flame (X. 21. 3), the dark cloud (I. 79. 2; I. 164. 47; IV. 17. 14), the black cow (I. 62. 9; IV. 3. 9; etc.), the black-spotted antelope (X. 94. 5) and the dark-complexioned sage Kaṇva (X. 31. 11). Varuṇa's rays are some dark (black) and some white (VIII. 41. 10). Lastly, in another verse (IX. 41. 1) we are told that Soma, becoming brilliant, movable, and

swift like water removes the darkness. This no doubt refers to moonlight destroying the darkness of the night.

The seven hymns referred to above describe the conflict between *Kṛṣṇa* and Indra. We are told that Indra, with his brilliant energy (III. 31. 21) and with the help of Rjīśvan (I. 101. 1), killed (I. 101. 1) or destroyed (III. 31. 21) *Kṛṣṇas*, 50,000 in number (IV. 16. 13) or those with dark womb (I. 101. 1). Indra destroyed the dwelling place of the *Kṛṣṇas* (IV. 16. 13). He kills *Kṛṣṇa* by taking off the dark covering (skin) and reduces him to ashes (I. 130. 8). Lastly, in three passages, we are told (i) that *Kṛṣṇa* with his 10,000 (men) was waiting on the bank of Amśumati river; Indra by his diligence (śaci) found out the roarer and killed them all for the benefit of men (VIII. 96. 13), (ii) that Indra, finding the fast-moving *Kṛṣṇa* travelling in a wide area at some concealed place of Amśumati river asked the Maruts to kill him (VIII. 96. 14), and (iii) that Indra, finding the fast-moving *Kṛṣṇa* holding his body prominently near the river Amśumati killed him and his lightless, coming soldiers with the help of Brhaspati.

We are inclined to believe that the demon *Kṛṣṇa* is a representative of the 'dark cloud' for the following reasons: (i) The term has been applied to darkness in other places. (ii) Its characteristics as a roarer, fast-mover, and one destitute of light. (iii) The presence of a dark womb. (iv) The intervention of the Maruts, indicating high winds or storms accompanying (or causing) their dispersal.

Two peculiarities to be noticed in some of the passages on the conflict between Indra and *Kṛṣṇa* are that no rainfall is mentioned in this connection and that the Maruts intervened in the conflict. We know (*Enc. Brit.*, 11th ed., Vol. 6, article 'cloud,' p. 558; *Ibid.*, 14th ed., Vol. 5, article 'cloud,' p. 852) that there is a form of cloud, named *Strato-cumulus*, which consists of large globular masses or rolls of dark or dull grey colour frequently covering the whole sky; it does not bring rain. Further, owing to the numerous rolls, the authors of the verses probably referred to them in the plural number. The Amśumati river may be an earthly river or more probably the bright Milky Way.

(14) *Cumuri* and *Dhuni*. The two demons have been mentioned, always together, in six passages. They have also been mentioned with *Pipru*, *Suṣṇa*, and *Sambara* in one ṛk (VI. 18. 8). The word *dhuni* has elsewhere been used for the river (II. 15. 5; II. 30. 2; V. 87. 3) and as qualifying Indra causing trembling (V. 34. 8) of the enemies (I. 174. 1; X. 89. 5), the Maruts as roarers (I. 64. 5; VII. 56. 8; X. 95. 3) or trembling (VI. 5. 5; VI. 66. 10; X. 78. 3) or causing trembling (I. 87. 3; V. 60. 7; VIII. 20. 14), the earth as trembling (I. 87. 3) and the cloud as trembling like the skin of the horse (X. 149. 1). In

one place (II. 15. 5) we are told that Indra lessened the amount of water of this (some particular) large river for crossing it ; he made those cross the river safely who were unable to do so. This passage evidently refers to the drought of the summer before the onset of rain. Considering the demons, we find that Indra killed them both (VI. 18. 8 ; VI. 26. 6 ; VII. 19. 4 ; X. 113. 2) for the king Dabhīti (VI. 26. 6 ; etc.) ; he sent them to sleep in favour of Dabhīti (II. 15. 9 ; VI. 20. 13). Lastly, we are told that he killed *Cumuri*, *Dhuni*, *Pipru*, *Šambara*, and *Šuṣṇa* (VI. 18. 8).

Cumuri may be derived from *cu*, to make noise, to sound, and *mur*, to encompass, to surround, and may be made to signify 'one which produces sound and surrounds all sides'. *Dhuni* is derived from *dhun*, to roar and may mean 'a roarer'. Taking the above meanings we consider them to represent 'clouds which give rise to sounds'. *Cumuri* may be made to represent that form of cloud which spreads all round and produces a wild sound. *Dhuni* may be made to represent the typical form of 'thundercloud' or *cumulonimbus*, characterized by thunders, lightening and storms, generally followed by local showers of rain (*Enc. Brit.*, 11th ed., Vol. 6, p. 559 ; 14th ed., Vol. 5, p. 852).

(15) *Dāsa*. The term occurs in a large number of passages. That the word was primarily used for the original inhabitants of the country, who were different from the Aryans, appears from the passages in which they are mentioned in contrast with the Aryans (VI. 22. 10 ; VIII. 51. 9 ; X. 38. 3 ; etc.) and from such passages as 'Aryans are equal in match with the Dāsas' (X. 108. 3). We also see that the Aryans used to accept gifts or presents from the Dāsas (VIII. 46. 32), and that the Aryans used to pray for getting a hundred Dāsas (VIII. 56. 3). These Dāsas were employed as servants (VII. 46. 7). Again, owing, no doubt, to constant warfare between the Dāsas and Aryans, the Dāsas were really the enemies of the latter ; and we find all sorts of prayers by the Aryan sages against the Dāsas addressed to the deities and particularly to Indra (II. 20. 6 ; IV. 18. 9 ; VIII. 24. 27 ; etc.). Along with these prayers we find mention of many characteristics of the Dāsas. We are informed of their strength (VIII. 40. 6), their anger (I. 101. 2), their mischievousness (II. 20. 6), particularly to the *sādhus* (VI. 60. 6), their soldiers (IV. 18. 9), and of their nature—they do not perform yajña and do not follow the usual rites ; their (religious) performances are quite peculiar and they cannot be considered as human beings (X. 22. 8). Further, we have mention of Dāsas, as Navavāstava and Brhadratha (X. 49. 6), Dāsa-kings, as Yadu and Turvā (X. 62. 10) and Dāsa's wives (I. 32. 11 ; III. 12. 6 ; V. 30. 5 ; VIII. 96. 18). Lastly, considering the loss and injury from the various natural phenomena, the vedic sages figuratively took them as demons

and qualified them as *Dāsas*. Thus Ahi (II. 11. 2), Kuyava (VII. 19. 2), Namuci (V. 30. 7, 8; VI. 20. 6; X. 73. 7), Pipru (VIII. 32. 2), Varci (IV. 30. 15; VI. 47. 21), *Vṛsaśipra* (VII. 91. 4), *Viśvarūpa* (X. 99. 6), *Śambara* (IV. 30. 14; VI. 26. 5; VI. 47. 21), and *Śuṣṇa* (VII. 19. 2) have all been designated as *Dāsas*.

(16) *Drbhika*. The term occurs once (II. 14. 3) where we are told that Indra killed *Drbhika*. We can derive the term from *drbh*, to be afraid of, and thus make it mean 'something of which one is afraid'. We are unable to say whether it may or may not mean long continued drought which was destructive to the crop and was thus the cause of great anxiety on the part of the Vedic sages.

(17) *Namuci*. The name is found nine times in the Rigveda. He has been called *āśura* (demoniacal) (X. 131. 4) and *Dāsa* on several occasions (V. 30. 3; etc.). We are told that Indra killed the trickful *Namuci* (I. 53. 7; II. 14. 5) and that he killed *Namuci* and *Vṛtra* (VII. 19. 5). Indra beheaded *Namuci* with water foam (VIII. 14. 13). He twisted *Namuci*'s head (V. 30. 7) and twirled off his head turning it like a piece of stone (V. 30. 8). *Namuci*'s wives were like weapons (that is, were his soldiers); knowing that they would be able to do nothing against him, Indra kept under lock his (*Namuci*'s) two favourites inside his (*Namuci*'s) house and then went to fight with *Namuci* (V. 30. 9). We are also told that *Asvins* came to help Indra in his conflict with *Namuci* (X. 131. 4) and when Indra crushed the head of the mischievous *Namuci*, protected *Namī sāpya* (*sāpya*—the idle, sleeping) and provided him with an enormous amount of money and food, the falcon carried the intoxicating Soma to Indra (VI. 20. 6). Lastly, we find a long story of this conflict in *Satapatha Brāhmaṇa* (15. 7. 3. 1-3), *Taittiriya Brāhmaṇa* (1. 7. 1. 6-7), and *Tāṇḍya Brāhmaṇa* (12. 6. 8). The purport of the story is this: *Namuci* got the boon that he will not be killed at night or day, not by a rod (*lāṭhi*), blow, slap or fist, and not by drought or moisture. When Indra took a vow to kill him, *Asvins* and *Sarasvatī* shed water foam like a thunderbolt *Vajra* and produced neither drought nor moisture and Indra was able to kill *Namuci* in the early morning before sunrise, neither at day nor at the darkness of night.

The word *namuci*, is derived from *na-muci*, meaning 'not letting go' (Pāṇini VI. 3, 9), that is, not giving rise to rains. This idea is further strengthened if we take *aśman* (V. 30. 8) to mean cloud (as held by *Sāyana*) instead of a piece of stone which (latter), however, seems to be more appropriate. Again, instead of taking *Namī sāpya* as a person, we may consider it to be a fertile field (?) [*Namī* from *nam*, to cause to sink or soak (water) and *sāpya*, relating to fertilization]. Thirdly, we find that *Namuci* can only be killed by foams of water and only in the morning between night and sunrise. Taking these

facts into consideration, we take Namuci to be a representation of 'the morning fog of winter in the valleys abutting on fast-flowing rivers'. We are particularly reminded of the condition towards the end of the winter when the period of bitter cold has passed and ice and snow have begun to melt. This condition is perhaps referred to when we are told that *Namuci* was killed by the foams of water. The melting of ice results in the swelling of the rivers with the formation of strong currents and formation of much foam, as they flow down the valleys. The whole night (sometimes the whole day as well) remains shrouded in such fog, to be cleared up only in the morning before sunrise. Such fog, owing to a comparatively warmer atmosphere, instead of giving rise to frosts or frozen water, simply settles as moisture on the ground and improves the fertility of the soil. This condition, in my opinion, is referred to when we are told that Indra protected the idle *Namī sāpya* whom he provided with an enormous amount of money and food. We understand that the valleys, formerly lying barren without vegetation, now becomes fertile with moisture and produce plenty of crops.

The association of the Asvins, whom I have already shown to be identical with the two twin stars of *Asvinī* (α and β Arietes (*Indian Historical Quarterly*, Vol. VI, 1, 1930, p. 172), with Indra in the conflict with Namuci indicates that they used to rise above the horizon in the early morning at that time. This approximately corresponds to the time when the vernal equinox was passing through the end of the *bharanī* (35 Arietes), i.e. about 1350 B.C.

The falcon seems to be the constellation *Aquila*, which also used to appear high up in the sky, the moon remaining near the constellation. We know that *Śravanā* (Altair), the junction star of the asterism is placed in the neck of the constellation figure of *Aquila*.

(18) *Pipru*. This demon, designated both as an *Asura* and *Dāsa*, has been mentioned some eleven times. We are told that Indra killed *Pipru* (I. 101. 2 ; I. 103. 8 ; II. 14. 5 ; etc.) or destroyed his strength (X. 138. 3) or brought him under control (V. 29. 11) for *Rjīsvān* (IV. 16. 13 ; X. 138. 3). We also find that Indra destroyed or broke down the dwelling place of *Pipru* (I. 51. 5 ; VI. 20. 7) and thereby protected *Rjīsvān* (I. 51. 1) and gave money (wealth) to him (VI. 20. 7). He also broke the cow-shed of *Pipru* (X. 99. 11) with his bolt. Lastly, we see that Indra killed *Anarśani*, *Ahiśuva*, *Pipru*, and *Śrbinda* by pouring down water (VIII. 32. 2).

The word *pipru* has been derived from *pr* or *par* (by reduplication) meaning 'resister, antagonist' (see Macdonell's *Vedic Mythology*, p. 161). Finding that Indra kills him for water, we may take *Pipru* to represent some form of cloud. Taking into account the significance of the name, I am inclined to take it to mean some persistent form of cloud which, after

causing much distress by oppressive heat, ultimately ends in rain. It may be some form of *nimbus* (*Enc. Brit.*, 11th ed., Vol. 6, p. 559).

(19) *Mrgaya*. This is mentioned in three places, once with *Pipru* (IV. 16. 13) and once with *Arbuda* and *Vṛtra* (VIII. 3, 9). He has been called 'swollen' or 'provided' with growth (IV. 16. 13). We are told in one place (IV. 16. 13) that Indra killed him for Rjīśvān and in another place (X. 49. 5) that he was placed under the control of Srutarvāra. Lastly (VIII. 3. 19), we are told that he killed the trickful *Mrgaya* and others with his big bow and drove the cows out of the mountains.

Mrgaya has been taken by oriental scholars to qualify *Pipru* (*Vedic Mythology*, p. 161); but we are unable to do so in consideration of the three passages in which the name occurs. The word literally means a beast chased in sport. Taken figuratively, we are inclined to conclude that it represents a fast-moving fog which passes over the mountains, being chased by high winds and which spreads out to surrounding places. The 'cows' seems to indicate small masses of clouds (or fogs) on the sides or tops of the mountains. The bow is the rainbow.

(20) *Rudhikrā*. In one passage (II. 14. 5) we are told that Indra killed *Namuci*, *Pipru*, and *Rudhikrā*. We can derive the word from *rudhi*, bank (of a stream) or slope (of a mountain) from *rudh*, to obstruct, to withhold, and *krā*, from *kram*, to cover, to extend over; and we may thus infer something which covers the banks of rivers or the slopes of mountains. In such a case, considering that it is mentioned with *Namuci*, we may doubtfully take it to represent some form of mist or fog hanging over the bank of a river or the slope of a mountain.

(21) *Rauhina*. This is mentioned once (II. 12. 12), where we are told that Indra destroyed with his bolt the *Rauhina*, rising up to the heaven. See *Kalakanjas* (p. 65).

(22) *Varāha*. The term occurs several times in the *Rigveda*. It has been used to mean a boar (VIII. 77. 10), and figuratively to qualify Rudra (I. 114. 5) referring no doubt to its ferocity and ugly appearance, and Viśvarūpa (X. 99. 6). We are again told (I. 61. 7) that Indra cleaved *varāha*. It has also been used to qualify *Vṛtra* (I. 121. 11). We are thus inclined to take it to represent 'cloud'.

(23) *Varci*. This is mentioned four times, always with Śambara, both of them being addressed as *Dāsas* (VI. 47. 21). *Varci* has also been called *Asura* (VII. 99. 5). We are told (VI. 47. 21) that *Varci* and *Sambara* were killed by Indra in a place, so high as to be inaccessible (by climbing). Indra also killed a hundred thousand sons (II. 14. 6) or warriors (VII. 99. 5) or five hundred thousand attendants of *Varci* (IV. 30. 15).

The word *varci* is derived from *varc*, to shine, to be bright. Hence we can take it to be some bright object. Reference to

a place inaccessible by climbing (*udvraja*) leads us to the idea of the top of such mountains as are inaccessible. Further, the significance of the name as 'bright one' makes us think of 'sheets of ice' on the mountain tops appearing bright through reflection of the sun's rays.

(24) *Vala*. The term occurs about thirty times and has been used to mean 'strength, vigour, power' (some fifteen times) and to represent the demon killed by Indra. We are told that Indra killed *Vala* (I. 52. 5; III. 34. 10) and rescued the cows detained by *Vala* (II. 12. 3; II. 14. 3; X. 67. 6). Indra cleft the cave of *Vala* containing cows. *Vala* has been qualified as a mountain or mountain-like (*adri*) and a giver of benefit (*phaliga*); he was afraid of Indra's roaring (I. 62. 4). If the word 'phaliga' is meant for *Vala* (as we have taken here), then we are told (VIII. 32. 25) that Indra cleft the benefit-giver (*phaliga*) for water and made the rivers flow downwards. In another place (VI. 39. 2) we are told that Indra, desiring cows, broke the summit of *Vala* on the top of the mountains and subdued the Panis by his roars. Again we find (II. 11. 20) that Indra, accompanied by the Angiras turned round the cakras, as the sun does, and killed *Vala*. We are also informed of the slaying of Arbuda in the same verse. In another place (III. 45. 2) Indra again has been called a cleaver of *Vala*. We also find Bṛhaspati credited with the same feats; he killed *Vala*, the giver of benefit, with the aid of the good praising ones (IV. 50. 5); he caught hold of the cows of *Vala*; the sun and moon rose (in the heaven) due to this feat of Bṛhaspati (X. 68. 10).

Adri and *Vala* are synonymous with cloud according to Yāska (*Nirukta* 5. 21. 2). We find that Indra killed *Vala* on the top of the mountain and delivered the cows. We are inclined to take *Vala* to represent that type of cloud which instead of pouring down rain directly, gives rise to hailstorms, the hail subsequently melting into water. Such a type of cloud (*Enc. Brit.*, 14th ed., Vol. 5, p. 852), known as *cumulo-nimbus*, assumes the form of mountains or towers or anvils, 'from the base of which local showers of rain or of snow, occasionally of hail or soft hail, usually fall'. We can easily explain the significance of *sānu* (top, summit of a mountain) and *adri*, if we accept this view. The term *phaliga* is appropriately used for *Vala*, as the water ultimately formed is of great importance for the production of crops. The cows may be appropriately taken for the hail which gives rise to water by melting.

(25) *Vṛtra*. The word occurs many times. First, he has been called *Dānu* (II. 11. 18) and his mother is also mentioned (I. 32. 9). Five times (I. 32. 5, 8, 11; I. 51. 4; I. 80. 10) he has been designated (or qualified) as *ahi*, a serpent. He has also been mentioned as Indra's enemy. In Śatapatha Brāhmaṇa (I. 6. 4. 18) *Vṛtra* was identified with the moon. Secondly,

we know something of his bodily features. Thus he is said to be without hands and legs (I. 32. 7) and again with these same members of the body (III. 30. 8). He has a head (I. 52. 10), mouth (I. 52. 15), a pair of jaws (I. 52. 6 ; I. 80. 5 ; X. 152. 3), joints of the body (I. 11, 12) and sixteen coils of the body (Taittiriya Saṃhitā; II. 1. 4). Thirdly, we are informed of other characteristics. He is capable of growing (III. 30. 8), is lustreless or dull (III. 32. 6), remains in a lying posture (III. 30. 20 ; IV. 19. 3) in the sky (I. 52. 6), extends all round the sky without limit (I. 52. 6), extends both to the heaven and earth (I. 80. 4), binds the earth and heaven together (I. 52. 10), is surrounded by darkness (X. 113. 6), is not stationary, that is, is always moving (I. 32. 10) and is restless (I. 32. 10). He has a weapon (I. 80. 10). He is again the obstructor of water (I. 52. 6 ; X. 113. 6), coverer of water (II. 14. 2 ; III. 32. 6 ; V. 30. 6), absorber of water (I. 31. 19) and obstructor of rivers (I. 52. 2). We are also informed of his trembling (I. 80. 12 ; VIII. 6. 6) and roaring (I. 30. 12 ; III. 30. 8). Fourthly, we come to consider the conflict between *Vṛtra* and several deities. We are told that Indra killed *Vṛtra* (I. 103. 8 ; III. 32. 6 ; IV. 28. 1 ; V. 29. 3 ; etc.) by cutting off his arm ; and *vṛtra* fell down on the earth like the trunk of a tree cut off with an axe (*kuthāra*) (I. 32. 5) ; he struck at the mouth of *Vṛtra* (I. 52. 15) ; he struck at his shoulder (I. 32. 7), and *Vṛtra*, who held the water during his lifetime, now lay at its feet (I. 32. 8) ; he cut *Vṛtra* into pieces at the joints (VIII. 6. 13) ; he struck at the two jaws of *Vṛtra* (I. 52. 6 ; I. 80. 5), cut off his head (I. 52. 10), cleft his vital parts (I. 61. 6 ; VIII. 100. 7) and divided the joints by his bolt (I. 61. 12). Indra killed *Vṛtra* with the help of the Maruts (III. 47. 3 ; VIII. 2, 36 ; VIII. 76. 2) ; he came to know the vital parts of *Vṛtra* by being sent by the Maruts (III. 32. 4). Again we are told (VIII. 7. 23) that the powerful, kingless and rain-giving Maruts killed *Vṛtra*, huge like a mountain, by cutting it into pieces at the joints. Again we are informed that Indra delivered water after killing *Vṛtra* (I. 85. 9 ; V. 29. 2 ; etc.). We further see that Indra has been praised for having removed the cover of the waters, for having got hold of the wealth of the *Dānvas* on the mountain and for having made the sun ascend the sky and thus made him visible to us after killing *Vṛtra* (I. 51. 4). We are further told (I. 80. 13) that, when Indra struck *Vṛtra* and his weapon with his bolt and he was determined to kill him, his strength spread all round in the sky and he displayed his supremacy. The *Dāsa*'s wives, protected by *Ahi*, were confined ; the gate for (allowing) the flow of water remained closed. Indra opened the gate after having killed *Vṛtra* (I. 32. 11). Again, we find that *Trita*, strengthened by food, killed *Vṛtra* by cutting into his joints (I. 187. 1). We also see that *Soma* killed *Vṛtra* (IX. 61. 20). Lastly, we are told (I. 32. 9) that *Vṛtra*'s mother remained looking downwards

and Indra struck at her lower portion ; then the mother remained above and the son, *Dānu*, below, like a cow with her calf.

We have reference to *Vṛtra* in later Vedic literature. In *Taittirīya Samhitā* (I. 2. 1) Soma has been called the pupil of *Vṛtra*'s eye ; we are also told that Indra killed *Vṛtra* with the help of Soma and Agni (I. 6. 11). In *Satapatha Brāhmaṇa* (3. 1. 3. 12) we are told that, when Indra killed *Vṛtra*, his eyes made the mountain three-peaked. We find the same legend in the *Atharvaveda* (IV. 10. 1).

In *Nirukta*, both *Ahi* and *Vṛtra* are mentioned as synonyms of the cloud (2. 21. 2). *Ahi* is again a synonym of water (2. 42. 2) and *Vṛtra* of wealth (3. 9. 9).

Ahi and *Vṛtra* have been taken as synonymous in five passages already referred to above and in *Nirukta*. But, in spite of the common traits assigned to them in a few other places, we find many differences in their physical features in passages devoted to them individually. Thus, both of them are roarers, obstructive to water, and remain in a lying posture ; Indra killed both of them and made the waters run. Again, *Ahi* lives in a cave, remains concealed, is incapable of being seen and is a terror of the sky and heaven ; whereas, *Vṛtra* extends all round the sky, both to the heaven and earth without limit, is never stationary and is restless. *Ahi* causes the appearance of lightning and roaring of the cloud, but nothing is said of *Vṛtra*. Indra drove *Ahi* from the earth, but nothing of this kind is known of *Vṛtra*. Further, there is a difference of opinion regarding the physical characteristics of *Vṛtra* itself ; at one place he is called limbless, but at another place he is said to be possessed of limbs which are cut off by Indra. Taking all these facts into serious consideration I am inclined to the idea that *Ahi* and *Vṛtra* were originally different demons—representatives of different physical phenomena, but later were used to represent the same, perhaps owing to confusion of the ideas of the later Vedic sages regarding their physical features. We are still capable of indicating their differences. Thus, *Ahi* was the serpent of the sky ; he was a terror of the sky and heaven, and he was killed by *Trita*. Considering these and many other features that we have already discussed under *Ahi*, I conclude that it originally represented the constellation figure of *Hydra*. All the attributes of *Ahi* can be well explained if we take this constellation to rise above the horizon at the time of summer solstice, the period of rains. Plunket (*Ancient Calenders and Constellations*, pp. 117-9) has already shown that *Vṛtra* represents the constellation, *Hydra*, and that the summer solstice was above its middle and that the equator was passing through the coiled body of the snake-like constellation at about 4000 B.C. I take *Ahi* to represent this constellation. Considering the principal physical features of *Vṛtra* (sometimes repeated several times), I agree with the idea of the

oriental scholars and take it represent the cloud. We can, more specifically, take it to represent that form of cloud which is known as *Nimbus* or raincloud (*Enc. Brit.*, 14th ed., Vol. 5, p. 852). 'If there are any openings in the cloud an upper layer of cino-stratus or alto-stratus may almost invariably be seen through them.' We may take these latter to represent *Vṛtra's* mother (I. 32. 9).

We may now interpret, so far as it is possible, some of the passages in connection with *Vṛtra*. *Agru's* son, in the anthill (see under *Ahi*) seems to be the larva of the white ant coming out of the egg, with a segmented body. The term *agru* means single and we cannot definitely say whether the Vedic sages knew that the eggs are laid parthenogenetically by female white ants. The moon has been called the pupil of *Vṛtra's* eye. This probably refers to the rent formed in the cloud through which the moon could be seen. The making of a three-peaked mountain by the eye of the *Vṛtra* probably also refers to a large ragged gap on the mountain top so as to make it appear as three-peaked.

(26) *Vṛṣaśipra*. In one place (VII. 99. 4) we are told that Indra and Viṣṇu destroyed the trick (māyā) of *Vṛṣaśipra*. The term can be derived from *Vṛṣa*, bull, and *śipra*, snout (*Nirukta* 6. 17. 2), thus signifying one with a snout like that of a bull. If we take into account the black colour of the snout, we may extend the meaning to 'one black like the snout of a bull'. In such a case we may think that *Vṛṣaśipra* represents a 'dark cloud'.

(27) *Śambara*. The name occurs some twenty-two times. He has been called *dāsa* (IV. 30. 14; VI. 26. 5; VI. 47. 21) and the son of *Kulitara* (IV. 30. 14). We are told that Indra killed *Śambara* (I. 51. 6; I. 54. 4; I. 101. 2; VI. 18. 8) for the benefit of *Divodāsa* (I. 130. 7; V. 19. 6; VI. 21. 5; VI. 43. 1). Indra destroyed the dwelling-places of *Śambara* (I. 103. 8) which were ninety-nine in number (II. 19. 6; IV. 26. 3; VI. 47. 2) or 100 in number (II. 14. 6); he did so with the help of Viṣṇu (VII. 99. 5). The dwelling places of *Śambara* were difficult to destroy (VI. 31. 4). There are some peculiarities in the conflict between Indra and *Śambara*. Indra killed *Śambara* in high mountains (VI. 26. 5; VII. 18, 20) with the face directed downwards (IV. 30. 14) and in high altitudes (*udvraja* region—so high as to be inaccessible by climbing) (VI. 47. 21) and threw him down from the mountain (I. 130. 7). In one place (II. 12. 11) we are told that Indra searched for *Śambara*, who was hiding in mountain, for forty years and at last got hold of him. We also find that *Brhaspati* killed *Śambara*, made the fixed (motionless) water flow and entered the mountain full of harvest (II. 24. 2). We also find that *Vaiśvānara* Fire destroyed *Śambara* and made the water flow downwards (I. 59. 6). We are further told that *Śambara* was killed by Indra for the benefit

of Divodāsa (I. 130. 7 ; II. 19. 6 ; VI. 21. 5 ; VI. 43. 1), who was rescued by Indra from being drowned in water (I. 112. 18). Soma also placed *Śambara* under Divodāsa's control in one day (IX. 61. 2).

According to Naighantu, *Śambara* means a cloud (1. 10) and power, strength (2, 9).

Comparing the conflicts of Indra with *Varci* and *Śambara*, we find that both of them were killed in a place so high as to be inaccessible by climbing and that a large number of their followers were killed by Indra. Whereas nothing further is said of *Varci*, *Śambara* is said to have been killed on high mountains with his head directed downwards and to have been thrown down from the mountain. As he was killed, fixed (motionless) water was made to flow. Agni is also said to have killed *Śambara* and to have made the waters flow downwards. Thus, having taken *Varci* to represent sheets of ice on the mountain top becoming bright through the reflection of the sun's rays, we are inclined to take *Śambara* to represent large masses of ice on mountains at a lower level. Whereas *Varchi's* destruction did not lead to any memorable event, *Śambara's* destruction led to some events described by the sages. Stripped of their allegoric coloration, they consisted principally of the melting of ice on the mountains by the sun's heat of the summer and the flowing of water down the mountains, with sheets of ice floating in it. The dwelling places of *Śambara* were thus the ice-clad top and sides of the mountains. Thus we find that *Varci* represents sheets of ice on the top of the higher mountains above the snow line, slightly melted by the sun's heat and that *Śambara* is the representative of large sheets of ice below the snow line which becomes melted in the summer and produces large currents of water (with ice sheets floating in them) flowing down the sides of the mountains. The finding of *Śambara* after forty years' search probably refers to a particularly cold winter (with the formation of much ice on the mountain) and followed by an intensely hot summer (with melting of ice and production of large currents of water flowing down the mountains)—an event quite unusual and not known to have occurred during the previous forty years. That there was a great flood is also indicated when we are told that the king Divodāsa (during whose reign this event took place) narrowly escaped death from drowning.

(28) *Suṣṇa*. The name occurs some thirty-eight times. First, we find a number of attributes of *Suṣṇa*. He is defying (I. 54. 5), roarer (I. 54. 5), devouring (that is, devourer of moisture) (II. 14. 5 ; II. 19. 6), destroyer (VIII. 6. 14), giver of unhappiness (IV. 16. 12), approacher of darkness (V. 32. 4), well-grown (V. 32. 4), preserver of cloud (V. 32. 4) and producer of heat (?) (V. 32. 4). He is trickful (V. 32. 4). He is attended with followers (I. 54. 5) and is a dweller among men

(*nārṣada*) (X. 61. 13). His dwelling place is moveable (VIII. 1. 28). He is hot-tempered (V. 32. 4). Secondly, we find Indra killing *Suṣṇa*. Indra has been invoked to kill *Suṣṇa* (I. 175. 4; X. 22. 7). Indra killed *Suṣṇa* (III. 31. 8; IV. 16. 12; etc.) by his bolt (V. 32. 4; etc.). He cut the body of *Suṣṇa* (VI. 26. 3; VIII. 40. 10; etc.). He hurt *Suṣṇa* by going round the earth (X. 20. 4). He destroyed his dwelling place (I. 51. 11; IV. 30. 13; VIII. 1. 18) and his family (X. 22. 11), Indra removed the cap of *Suṣṇa's* head (I. 54. 5) and destroyed his strength exhibited on the sky (I. 121. 10). Indra filled the wells with water (VIII. 51. 8) and made the water flow in streams (I. 51. 11) after he had killed *Suṣṇa*. Lastly, we are told that he killed *Suṣṇa* for the benefit of Kutsa (II. 19. 6; IV. 16. 12; VI. 20. 5).

In Nirukta (3, 9. 7) the term *Suṣṇa* occurs as a synonym of strength. From the attributes of *Suṣṇa*, there is no doubt that it represents 'drought', as already shown by oriental scholars.

We have another demon, *Anarśani*, which seems also to represent 'drought'. Comparing their attributes, we may consider *Anarśani* as representing a mild form of drought relieved by light showers and *Suṣṇa* as a severe and long-continued form ending in heavy showers of rain.

Here we have reference of a long-continued severe drought during the time of Kutsa.

(29) *Sribinda*. The term occurs once (VIII. 32. 2) with *Anarśani*, *Pipru*, and *Ahiṣuva*. Vedic scholars consider it and several others as 'a historical reminiscence of prominent terrestrial foes' (Macdonell's *Vedic Mythology*, p. 162).

We can, however, derive the word from *sri*, to flow, to cause to flow, and *binda*, from *bid*, to split up, thus signifying one which can be split up and made to flow. In such a case we may take it to represent a small rain cloud, clearing away after a local shower.

(30) *Svarbhānu*. The word occurs four times (V. 40. 5-9). He has been called an *āsura*. He covered the sun with darkness and Indra removed the trick (darkness) of *Svarbhānu*. Ahi put back the sun's eye (disk) on the sky (V. 40. 8). Ahi's sons released the sun from the darkness of *Svarbhānu*. We are also informed in the Brāhmanas (Gopatha, part 2, 3, 19; Tāndya 4. 5. 2; Śatapatha 5. 3. 2. 2) that *Svarbhānu* covered the sun with darkness.

As is well-known, *Svarbhānu* is the shadow caused by the moon's disk in a solar eclipse. It corresponds to *Rāhu* of Paurāṇik literature. We have many references to solar eclipses in the Vedic and Brāhmanic literature. Perhaps the above hymn refers to a *total* eclipse.

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